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An Address.[1]

A REVIEW OF THE YEAR'S WORK.

By T. E. VICTOR HURLEY, C.M.G., M.D., M.S. (Melbourne), F.R.C.S. (England), F.R.A.C.S.,

Retiring President of the Victorian Branch of the British Medical Association.

DURING the year many important matters have been dealt with, and I wish to take this opportunity of thanking members of the Council for their loyal support, and for the close attention they have given to the affairs of the Branch. It is especially pleasing to be able to report that the work of the Council and of its subcommittees proceeded smoothly and harmoniously throughout the year. This desirable state of affairs is a matter of special importance at the present time, when our members are beset with so many difficult problems, both as a profession and as individuals. An undivided profession is our best safeguard in facing the difficulties before us.

The high standard and prestige of our profession were not lightly gained by our predecessors. They have not always existed, and may not continue in the future unless we zealously safeguard them and hand them on to those following us. Rapid and violent fluctuations are taking place in the social and economic affairs of the community, and these have a considerable influence on all the professions, and on none more than the medical profession, as it is so closely bound up with the general welfare and health of the people.

Because of our special knowledge and experience, it is our responsibility to advise the public on the measures necessary for the maintenance of health and the prevention of disease. We should also advise on the means by which these should be pro-

[1] Delivered at the annual meeting of the Victorian Branch of the British Medical Association on December 2, 1931.

vided. Too often, however, we have failed to do this, and on such matters which are of vital importance to the people as a whole, and to the medical profession in particular, others have taken the lead and have arranged these things for us. On matters concerning the health of the people and the part we should play therein, we should have a clear and definite policy. We must also be prepared to alter our policy to meet the changing needs of the times, and, in particular, the various demands for service made from time to time on us by the community. An outstanding example of our failure to keep pace with the times is shown by our hospital policy, which we have not altered in essentials for many years, although it is common knowledge that the conditions of service and the types of patient in public hospitals have profoundly changed in the last few years.

I propose, therefore, tonight first to discuss some aspects of present day hospital problems and some of the conclusions the Council has come to. On no subject is there more room for individual differences of opinion, but nevertheless it is necessary that as a profession we should be able to inform the public what our collective attitude is.

When we consider that between 40% and 45% of the people of Melbourne requiring in-patient hospital treatment for serious illness are admitted to public hospitals and are there treated gratuitously by the medical staffs, it will be realized that this matter vitally concerns the whole profession. The general public does not in the least realize the tremendous burden of free service which is borne by our members, and which is increasing each year. Notwithstanding this free service, the finances of the public hospitals in this State are steadily going from bad to worse. For the year 1929-1930 the excess of expenditure over receipts in the public hospitals of Victoria was £87,581, which, added to the deficiency in their combined maintenance accounts on June 30, 1929, of £88,954, made a total debit on working expenses on June 30, 1930, of £176,535. Through the courtesy of the Inspector of Charities I have been supplied with the figures for the year ending June 30, 1931, and these show a further deficit of £44,052 on the year's working. The position in some of the other States is even worse.

The following figures, taken from official Government publications and Charities Board reports, show how the demands for public hospital services have grown in recent years. The chief items of receipts and expenditure are also analysed.

The types of hospitals that exist in Victoria are set out in Table I.

The following official figures show the rapidly changing conditions in public hospitals in Victoria and in the class of patients receiving treatment there. This is shown in Table II.

This information in Table II may be put in another way.

In the last twenty-six years in the State of Victoria—
- The population has increased by 21·4%.
- The number of in-patients in public hospitals has increased by 112·6%.
- The number of out-patients in public hospitals has increased by 160·9%.
- Contributions from in-patients have increased by 862·9%.
- Contributions from out-patients have increased by 472·6%.
- In 1901 the average payment per in-patient was 7s. 7d.
- In 1926 the average payment per in-patient was 35s.
- In 1901 the percentage of hospital patients to the total population was 7·1.
- In 1926 the percentage of hospital patients to the total population was 14·5.

The following statement shows the sources of revenue of public hospitals in Victoria.

Of the total revenue:

Local contributions from general public	33·0% approximately
Patients' contributions	25·0%
Government subsidies	17·0%
Municipal subsidies	2·5%
Other sources—sundry	22·5%

TABLE I.

Type of Hospital.	Number in State.	Beds.	Type of Patients.	Medical Service.
Public	57 (Metropolitan = 11, 5 general[1] and 6 special)	2,289	(a) Indigent—paying nothing. (b) Contributing up to cost of hospital maintenance.	Free—by Honorary Medical Staff.
Intermediate	4 (All metropolitan, but many private hospitals keep a few intermediate beds)	250	Pay reduced or intermediate medical and hospital fees.	Private arrangement with attending practitioner.
Private	480 (Metropolitan = 207, country = 273)	3,701	Pay ordinary medical and hospital fees.	Private arrangement.

[1] Three of these are clinical schools recognized and approved by the University. There is no University hospital.

TABLE II.

Year.	Population.	In-Patients.	Out-Patients.	Contributions from In-Patients.	Contributions from Out-Patients.	Total Contributions.
1901	1,400,000	25,351	74,086	£9,843	£5,042	£14,885
1926	1,700,000	54,008	193,325	£94,784	£28,871	£123,655

The statistics given in Table III afford a comparison of the position in 1920, in 1925, and in 1930, and show the percentage increases during the last ten years in the metropolitan general hospitals. The population of the State on June 30 last was 1,800,000.

Financial Position of Charities Subsidized, June 30, 1930.

Maintenance—	£	£
Deficiency at June 30, 1929—		
Overdrafts	160,363	
Cash in hand	71,409	
		88,954
Receipts, 1929-1930	935,361	
Payments, 1929-1930	1,022,942	
Excess of expenditure over receipts		87,581
		£176,535
Deficiency at June 30, 1930—		
Overdrafts	231,345	
Cash in hand	54,810	
Deficit as above		£176,535

In discussing this matter in 1928 I stated that at that time it could not be claimed that there had been a depreciation of the financial conditions of the general community in any way comparable with these increased demands on the public hospitals and its associated free medical service. Many factors are responsible for this. One is the altered attitude of the public, of governments and of responsible bodies, in that these hospitals are regarded not so much as charities as utilities, although we as a profession continue to regard them as charities and give our services accordingly. Another factor is the increasing complexity of modern medicine and its allied sciences, with greatly increased cost of medical investigation and care. This latter problem has been a subject of close consideration in many countries. In the United States of America a special committee was appointed to examine the whole position. The report of this committee is not yet complete, although it has been engaged on its task for some years.

The changes in the social and economic conditions of the people in recent years have also profoundly affected the situation. One of the most striking of these changes has been the alteration of the distribution of money in the community so that an increased proportion is in the hands of that section which has always largely used the public hospitals. The financial crisis through which we are now passing, has served to accentuate the difficulties of a problem which has called loudly for solution for many years. It is thoroughly wrong in principle and against the best interests of the people that such an essential service as their medical care in sickness should be so largely dependent on the charity of the generous section of the community and the free service of the medical profession.

Governments and the committees of management of public hospitals are well aware that the rapidly increasing financial difficulties of the public hospitals cannot long continue, and some remedy, that is, fresh sources of income, must be found. In the good times of the past a generous public has responded to appeals from time to time to wipe out hospital overdrafts, but the results of the recent appeals have been so far short of requirements as to show that this source cannot be relied on any longer. The State Government has been compelled to reduce its grant and has stated its inability to do any more at present, although it hopes that the share of the totalizator receipts to be given to the hospitals later in the financial year may help to make up the reduction in the government grant. Apart altogether from the ethical or moral aspect of totalizators, State lotteries, and other forms of legalized gambling, it is wrong in principle that the solvency of hospitals and other essential agencies through which we render service to the people should be dependent on such haphazard methods of finance.

From time to time direct State management of hospitals is advocated, and most recently a few weeks ago at Canberra, to help the Canberra Hospital out of its financial difficulties. The Canberra position deserves some detailed consideration, especially as any action taken at the Federal Capital may have far-reaching effects throughout the Commonwealth. For the year ending June 30, 1931, there was a loss of £12,359 on the working expenses of the hospital for the year. Public meetings were held, and much discussion took place in the Canberra Press as to the steps which should be taken to remedy this. In the *Canberra Times* of August 24 last Mr. C. H. McFadyen, who took a prominent part in the discussions, put forward his proposals, and these met with much local support.

The solution he advocated was that the Government should assume control of the hospital, medical and related transport services of the Territory. Under such a system, he states, the doctors would become full-time Government officials on salaries to be determined according to their qualifications and existing practice. In determining the number of

TABLE III.

Personnel and Finance.	1920.	1925.	1930.	Percentage Increase in Ten Years.
Number of in-patients	14,429	17,359	24,455	69%
Number of out-patients	46,925	66,434	94,187	100%
Number of paid staff	737	864	1,261	71%
Wages and salaries paid to staff	£50,865	£81,492	£143,061	181%
Private subscriptions	£13,830	£24,948	£25,527	84%
Government grant	£28,100	£43,150	£77,361	175%
Patients' payments	£24,929	£42,218	£55,971	124%
Municipal grants	£2,023	£5,045	£5,258	159%

medical officers necessary efficiently to control such a scheme, every effort should be made, with due regard to finance, to absorb the whole of those officers actually practising in the Federal Territory at the moment. He is of opinion that the scheme would be financed partly by a definite contribution by the Government and partly by a levy on the citizens on a *pro rata* basis, according to income. As part contributors to such a scheme the citizens would be entitled to a voice in the government of the hospital, and elected nominee citizens with Government nominees should constitute the board of management. It is also stated that a wonderful opportunity would be open to residents in the Territory to institute such a system, the success of which would give a lead to the nation and thus mark an epoch in the development of medical treatment in the Commonwealth. Sufficient has been quoted from this article to show the lines along which nationalization of the hospitals and of the profession would proceed, and that this possibility is not so remote as some of us may imagine. Canberra would add one more Government department to its activities, and little difficulty would be experienced in finding officials whose daily life is spent in devising and administering regulations, to do the job thoroughly. The scheme outlined above involves the acceptance of principles to which we are absolutely opposed, the most important being government or lay control of the medical profession. It is also important to note that schemes to extricate public hospitals from their financial difficulties often involve proposals which would deprive us of our independence both as individuals and as a profession.

It is interesting to note that at a conference in England in 1925, organized by the Labour Party, direct State management of hospitals was at first advocated by the Labour representatives, but after the conference only a small minority of them were prepared to advocate such a state of affairs. The following resolution was unanimously adopted by this conference:

> Some form of public assistance is essential if a complete and adequate hospital system is to be maintained, and the development and maintenance of an adequate hospital system should be provided in such fashion as will preserve the best features of the present voluntary system.

Regarding State control, it is, of course, admitted that in the sphere of preventive medicine, governments, municipalities and other public bodies should assume this responsibility on behalf of the communities they represent. In so doing, they would be dependent on the advice of medical men qualified by special training and experience to be regarded as experts in this particular branch of medicine, and would employ the necessary medical services to carry out the work. In this connexion attention should be drawn to the fact that when the proposed Ministry of Health Bill was brought forward in this State last year, your Council strongly urged the State Government that the permanent head of the department to be created should be a fully qualified medical practitioner, highly trained in preventive medicine, as recommended by the recent Royal Commission on Health appointed by the Commonwealth Government. This Commission also stated that no lay official should be interposed between the permanent head and the Minister. The State Government, bringing forward the Bill again this year, has accepted the recommendation of your Council referred to above.

In the sphere of practising medicine, however, we regard it as another cardinal principle that nothing should be permitted to interfere in the peculiarly intimate and personal relationship which exists between the doctor and his patient in time of illness. It is of the utmost importance that this direct relationship should be maintained.

Having outlined briefly some of the more important factors in the present position, we may consider the measures recommended to remedy the situation. These have been arrived at after much inquiry into schemes adopted in other countries, and after discussions by the Council, meetings of delegates and special committees during the last five years.

It is regarded as an essential principle that any proposals put forward for a medical service (including hospital service) must provide effectively for every section of the community, so that we are able to supply to the people the full benefits of modern medical science and skill at a fair and reasonable cost for those able to pay, and gratuitously for those who cannot. We are convinced that there is a large section of the community which could be enabled to pay for this service under a system of insurance instead of relying on public hospitals and free medical service as at present. Of the people in the community 75% to 80% are in receipt of wages or income below £400 *per annum*, and it is largely due to the increasing demands of this section for public hospital service that the present position has arisen. It includes a large proportion of the regular wage-earners and those occupying lower salaried appointments, and it is to this section that contributory schemes are specially directed. A serious illness in such a family, particularly if the breadwinner is affected, is a financial calamity, as it involves an expense which cannot be met out of current resources or out of savings, which are often already committed in other directions. Many such people have not learned to provide for themselves against sickness, and feel that in times of illness there are always public hospitals to fall back on. Any qualms they may have against accepting charity are settled because they readily assume that by paying a contribution to the hospital, which in no case meets their cost of maintenance therein, they are doing all that can reasonably be expected of them; and, of course, the larger the contribution, the more difficult it is to convince them that no part of their contribution goes towards their medical service.

Realizing the serious position which was developing in connexion with hospitals and also with other

forms of medical service, the Council decided to initiate an inquiry into the situation. A standing Insurance Committee was formed, and members of the Branch were asked to contribute £6 each to a special fund to be used for this purpose. It will be seen from the annual report that approximately £1,500 has been received, apart from promises—25% of the members contributed. Those members who have not contributed, are urged to do so, as further funds will be required, and the work is being done on behalf of all members. Mr. Edgar Ward was appointed Secretary to the Standing Insurance Committee, and much work has been done. A report was drawn up and submitted to the Council, and this provided for a comprehensive medical service which is to be offered to contributors on a voluntary insurance basis. It is thought by a system of insurance that many people will be enabled, by their contributions when in health and regular employment, to be provided with medical service and also with funds to meet their hospital expenses when admission to hospital is necessary.

In THE MEDICAL JOURNAL OF AUSTRALIA of November 28 last there appeared an account of this scheme, and I would advise all members to read it.

Broadly speaking, it may be stated that the scheme is divided into two parts. The first part includes domiciliary service with investigational and pharmaceutical services. Under this part of the service contributors will be provided with medical service of the same type as ordinary private practice. They will be attended by the doctor of their own choice, who will have the benefit also of readily accessible investigational services—X rays, pathological, biochemical *et cetera*—which will be available at a reduced cost to contributors, which they can readily afford, together with a small payment for each service rendered. The principle of a mixed capitation payment has been decided on, as thereby the service rendered would be likely to be improved, and also the fund, and the doctor protected from demands likely to be made if a capitation payment only were adopted. Many of the abuses of the National Insurance Service in Great Britain and in contract practice generally are due to the fixed capitation payment for service. It is expected that by making such an up-to-date investigational service readily available at reasonable cost to contributors, many people who now go to the public hospitals, particularly to the out-patients' departments, for this work, will no longer need to do so. It will also enhance the work of the family practitioner, in that these investigations carried out on his behalf will enable him to keep in touch with this aspect of his work, with benefit to himself and to his patients. This part of the scheme is so intimately bound up with the personal relationship which we think should exist between doctor and patient, and with what are primarily purely medical problems, that it is thought it should be controlled by the medical profession. This is particularly the case at the inception of the scheme, when adjustments may be necessary in the light of experience. Control of these matters by governments and lay bodies has never been satisfactory, either to the people served or to the profession.

The second part of the scheme, in which provision is made for (i) nursing and hospital service, and (ii) consulting and specialist services, requires special consideration, because it is at this point that we come in touch with various hospital contributory schemes proposed by lay bodies to help the public hospitals out of the financial difficulties. They quite frankly admit that their interest in hospital contributory schemes is solely to maintain the solvency of the hospitals, and they are not particularly interested in the effect these proposals would have on the profession. The usual proposal is that in return for a weekly contribution—sixpence per week is a usual sum—contributors are promised public hospital treatment for themselves and their dependants when hospital treatment is necessary, if they cannot afford to pay for medical treatment. The ability to pay for medical treatment is most difficult to establish or to dispute, and in many cases resolves itself not so much on the ability as the willingness to pay or to make provision by savings in time of health. It is true that these schemes usually provide that if a contributor is able and willing to pay for medical treatment, he is entitled to draw from the fund an equivalent amount to that payable from the fund on his behalf to a public hospital if he had been admitted there. Notwithstanding this, we feel assured that unless some payment for medical services is included in such schemes, the medical profession would be asked to carry a still larger load of gratuitous service, and that actually the hospitals would sell nursing and medical service for sixpence a week to contributors and pay nothing for medical service. It is beside the point to state that contributors would be told they were not necessarily promised free medical treatment when they enrolled their names. Hospital committees would say that the contribution was to meet in part the cost of maintenance in hospital and had nothing to do with medical treatment. The contributor, on the other hand, would probably assert that he did not pay his contributions so that he could be maintained in hospital for some weeks, but that when he was in need of medical treatment he would be able to get it.

Members have approved of the Council's recommendations that any hospital contributory scheme launched by lay bodies should contain provision for: (i) Adequate representation of the medical profession on the executive body of such scheme; (ii) a proportion of the contribution should be for the provision of medical treatment; (iii) all benefits should be in the form of cash benefits; (iv) contributors, as such, shall not be given direct representation upon the executive of such scheme.

The Council further is of the opinion that charitable institutions or organizations responsible for the administration of public charities should not be the bodies to undertake these schemes; medical

treatment should not be provided as a charity in any contributory scheme, which, to be equitable, should pay for all services rendered to contributors and the rate of contribution fixed accordingly.

The striking success of the Bush Nursing Association in country districts shows what can be done when the people are given a scheme by means of which they are enabled to make provision for themselves against the time they may need hospital treatment. In larger centres and in the metropolis the conditions are different, in that local community interests cannot be enlisted in the same way. It is thought that in these larger centres such a scheme should be established and controlled by voluntary organizations which have established hospitals in the community interest and which are not conducted for profit or for charitable purposes. The work done in this direction by the churches in this and in other countries is of great value to the community and could readily be extended. Other bodies, such as friendly societies, masonic orders, and other similar organizations should have a direct interest in such a scheme, which would greatly benefit their members. Insurance companies, which seek to encourage thrift and self-help amongst the people by receiving their regular payments or premiums, in return for which provision is made against the various misfortunes which may occur to them, should be prepared to interest themselves. The nursing profession would have a direct interest, particularly in regard to a domiciliary nursing scheme. Voluntary organizations, such as churches, friendly societies, and masonic orders, are also able to enlist the services of auxiliary workers to promote such a scheme and actively work for it amongst their members.

The Council has decided to call a meeting of all such bodies likely to be interested in the scheme, when our proposals will be explained and discussed. From the inquiries we have already received, we feel assured that the people will be quick to realize the benefits of such a scheme. We believe that, by the adoption of our proposals, we will be enabled to pass on to the public many of the benefits of modern medical science from which some are now excluded, by reason of our present imperfect system of service or by prohibitive cost, that the standard of medical practice will be raised, and that the community as a whole will benefit by the provision of a better medical service than they have hitherto enjoyed.

GAS ANÆSTHESIA OF TODAY: A TRAVEL REPORT.[1]

By GEOFFREY KAYE, M.D.,
Honorary Anæsthetist, The Alfred Hospital, Melbourne.

Introduction.

GAS ANÆSTHESIA today needs no apology and small introduction. The present is no place to compare the relative safety of the inhalational as against other anæsthetic agents, but it may be safely asserted that the gaseous anæsthetics, adequately administered, are the safest, as well as the most pleasant, of inhalational anæsthetic drugs.

The phrase "adequately administered" is the key to the situation. Gas anæsthesia demands an elaborate and costly armamentarium and a high degree of skill in the anæsthetist. The anæsthetic gases, safe and efficient as they prove in competent hands, are in the hands of the tiro neither safe nor satisfactory. Hence, their administration has become more and more the province of the specialist anæsthetist. Specialism in anæsthesia is of recent growth, arising in response to the demands of modern surgery and in turn facilitating that surgery. To give but one instance, intrathoracic operations require and are made possible by anæsthetic technique of an advanced order. It is therefore to our advantage to consider the training and status of specialist anæsthetists in other lands.

In England anæsthetic specialism is an accomplished fact, and, whatever the average standard of English anæsthesia, her leading anæsthetists may rank with any in the world.

In Germany anæsthesia is entirely unspecialized. Nurse anæsthetists are tolerated in many departments, and, where the doctor anæsthetist exists, he is not a specialist. Indeed, the two men who rise most prominently above the mediocre level of German anæsthesia are competent general surgeons. With the intensive hospitalization existing in Germany, and with the proved German efficiency in other branches of medical science, it is surprising that the art and science of anæsthesia should remain so backward.

It is not unexpected that the highest development of anæsthetic specialism should be found on the North American continent. Here coexist the right conditions of extensive hospitalization, of economic resources, of research facilities, of sympathetic surgeons, and, above all, of a copious supply of competent and enthusiastic workers. The American anæsthetist, *par excellence*, is indeed a trained specialist, efficient and versatile, equally able to administer the anæsthetic gases for general surgical operations, dental operations or midwifery procedures, to undertake the therapeutic use of gases, or to effect the more complex procedures of regional anæsthesia. It is this man whom we must take as a model for the Australian anæsthetist of the future.

Indications for Gas Anæsthesia.

Gas anæsthesia remains in Australia the privilege of the poor-risk institutional patient or of the wealthy private patient. Economic causes and conditions of practice have debarred it from routine employment. A parallel is found in Germany, where the poverty of the post-war German hospital leads to the choice of the cheapest forms of anæsthesia. Despite this and the lack of adequate apparatus and of trained men, certain university clinics have adopted gas methods as a routine. In England,

[1] Read at a meeting of the Section of Anæsthesia of the Victorian Branch of the British Medical Association on April 16, 1931.

where the specialist anæsthetist enjoys considerable status and excellent fees, the newer school of anæsthetists is concentrating solely upon routine gas technique. In North America one would have to look far in the larger centres to find ether used otherwise than as an adjuvant to gas.

Modern anæsthetic apparatus is convincing us that there is practically no patient who cannot be adequately anæsthetized with the gas anæsthetics, with or without ether supplement. Experience has shown that the gas anæsthetics, properly administered, are the most pleasant and the safest of general anæsthetic agents, and those least liable to induce undesirable after-effects. Given, then, the gas, the machine and the man, we are justified in selecting gas as the anæsthetic of choice wherever inhalational anæsthesia is proposed. Anything which contraindicates gas anæsthesia, says a distinguished American anæsthetist, contraindicates general anæsthesia altogether.

Sedation.

Recent experience has shown the cardinal value of effectual preanæsthetic sedation. "Effectual" may be here variously interpreted. Some workers aim at doses of sedative drugs so great as to render the patient amnesic to events preceding the induction of anæsthesia. Many drugs have been employed for this purpose: morphine, hyoscine, orally or intravenously administered barbiturates, tribromethanol ("Avertin"). Such a result, however desirable, is often bought at the price of more or less circulatory or respiratory depression. To what extent this price is justifiable is a problem for the individual worker. It remains, however, that gas anæsthesia should be preceded by more or less sedation, not only to allay psychical disturbance, but also to lower body metabolism, with consequent reduction in the body's demand for oxygen. Morphine, with or without hyoscine, is the traditional standby. "Avertin" or the intravenous administration of "Pernocton" (sodium secondary bromallyl barbiturate) have each their advocates. America has lately introduced the oral or intravenous use of "Sodium Amytal" (sodium iso-amyl ethyl barbiturate) and of "Nembutal" (sodium ethyl methyl butyl barbiturate). Whatever sedative be selected, whatever the route of its administration, and whatever balance be struck between deeper sedation and depression, the fact remains that more or less sedation with a drug wherein the anæsthetist has confidence is essential to satisfactory gas anæsthesia.

The Use of Nitrous Oxide.

In England nitrous oxide has been employed in dentistry for many years. The old asphyxial technique is now obsolete, but the administration of nitrous oxide-air may still be seen in London hospitals, for example, Saint Thomas's Hospital. Specialist anæsthetists employ rather nitrous oxide-oxygen, and de Caux is a noted exponent of the method at the Royal Dental Hospital. American influences are naturally very obvious in this branch of anæsthesia.

In surgical work nitrous oxide-oxygen anæsthesia, whilst far from new, has recently taken great forward strides. The younger school of pure gas anæsthetists in London may be said to be led by Magill, de Caux and Hewer. Magill (Brompton and Saint Andrew's Hospitals) is a famed exponent of endotracheal gas anæsthesia, using nitrous oxide with fairly free admixture of ether. His technique involves inhalation, as opposed to insufflation, of the gas; this is effected at low pressure (about four millimetres of mercury) and is both economical and beautifully smooth. It involves the passage of a soft rubber catheter so large as practically to occlude the glottis, and through which to-and-fro breathing can take place. This tube may, where required, be inserted nasally, either "blindly" or under vision at the glottis. Cyanosis is particularly disliked. De Caux (North Middlesex Hospital) is, on the other hand, an exponent of pure gas-oxygen, with minimal recourse to ether. He shares McKesson's views, to be subsequently detailed, regarding cyanosis and secondary saturation. He employs the McKesson apparatus, and for endotracheal work uses low pressure inhalation through a modified Guedel-Waters inflatable cuff catheter. Hewer (Saint Bartholomew's Hospital) was formerly an exponent of free ether supplement. He now prefers a combination of pure gas-oxygen anæsthesia with other procedures, such as spinal anæsthesia.

In Germany gas methods are less employed than in London. Nitrous oxide finds a limited use at the Rudolf Virchow and Augusta-Victoria *Krankenhäuser* in Berlin, and rather more extensive employment at the *Allgemeines Krankenhaus* in Vienna. Munich, apparently lacking satisfactory gas apparatus, has practically reverted to ether. In Hamburg and Freiburg-im-Breisgau, more than elsewhere in Germany, gas methods are the routine. At the Eppendorfer *Krankenhaus* in Hamburg, Schmidt has introduced nitrous oxide, with abundant ether, since cyanosis is dreaded. The Schmidt-Sudeck-Dräger apparatus is employed, and an interesting feature is closed circle respiration by means of a potassium-lime carbon dioxide absorber. Routine anæsthetics are given by nurse technicians. In Freiburg (*Chirurgische Universitäts-Klinik*) Killian employs much nitrous oxide, as well as other anæsthetic gases. The same free employment of ether and avoidance of cyanosis are seen as in Hamburg, but there are no nurse anæsthetists. The Killian anæsthetic apparatus is employed. There is a prejudice in Germany against endotracheal technique, so this branch of gas anæsthesia was not seen there by the writer.

Turning to America, Philadelphia was the first centre to be visited. At the Hahnemann Hospital the complete adherence of American specialist anæsthetists to gas methods was soon apparent. Here, as in many American clinics, anæsthetics are given only by medical men. The existence of nurse technicians in certain centres is at present somewhat of a burning question with our American col-

leagues. At the Hahnemann Hospital, Tyler and Ruth are the leading gas anæsthetists. McKesson methods and apparatus are in use, and are well demonstrated in general surgical operations, in otolaryngological operations (under nasal gas in the Killian semi-upright posture) and in dental operations.

Toledo, Ohio, is a noted centre for gas anæsthesia. Here McKesson creates gas apparatus of great originality and anæsthetic technique no less original. Characteristic features of the teaching are the full use of pressure in dental and otolaryngological operations; the dictum that cyanosis is in itself no evil so long as all other signs of anæsthesia be favourable; and the practice of secondary saturation, that is, the seeking of the plane of optimal relaxation which lies just above the minimal oxygen requirements of the patient. This last, together with the above views upon cyanosis, can scarcely be advised for routine practice. Safe as they may be in the hands and with the apparatus of their propounder, they are scarcely suited to workers of less capabilities, with whom they may prove a prolific source of trouble. Nitrous oxide has still to conquer the adverse prejudices of British surgeons and is more likely to do so if teaching be directed towards the maintenance of a good colour by addition of a small amount of ether if necessary. Toledo offers an instructive picture of the adaptability of gas methods, from analgesia for dental drillings up to endotracheal insufflation anæsthesia for rhinological operations. The introduction of a recent self-recording McKesson anæsthetic apparatus has added new possibilities to clinical anæsthesia.

McKesson methods and apparatus are employed in Buffalo, New York (Evans) and at the Toronto General Hospital, Canada (Johnstone, Brown and others). The Toronto Hospital for Sick Children employs nitrous oxide from the Heidbrink apparatus. The Foregger apparatus is used by Long (Louisville, Kentucky) and by Bourne (Montreal), as well as by Sword of New Haven, Connecticut. This last worker favours nitrous oxide-air for obstetrical analgesia, claiming less excitement than if nitrous oxide-oxygen be used. The final stages of labour are usually completed under full ethylene anæsthesia.

Dental anæsthesia attracts earnest attention from the American dentists, many of whom are highly skilled gas anæsthetists. The existence in New York of a society for the promulgation of general anæsthesia in dentistry, under the presidency of Gwathmey, evidences the attention which the subject attracts.

Canada on the whole retains enough of English influences and of English conditions of practice to be less completely converted to gas anæsthesia than are the United States of America.

The Use of Ethylene.

There exists in England a prejudice against ethylene, based partly upon conservatism, partly on fear of explosion, and partly upon the difficulty of obtaining supplies of this gas uncontaminated with carbon monoxide (de Caux). Clausen alone has reported any considerable number of administrations. Endotracheally administered ethylene, so popular in other lands, does not seem to have gained place in London.

In Freiburg alone of the German clinics visited by the writer does ethylene find employment, and there on but a small scale. Motives of expense and the difficulty of obtaining ethylene free from carbon monoxide have induced Killian to employ nitrous oxide wherever indicated and, where not, rather acetylene than ethylene.

In America anæsthetists may be classified into those who adhere to ethylene, and those who adhere to nitrous oxide, with an intermediate group who find uses for each. To this last category belongs Waters, of Madison, Wisconsin, who utilizes nitrous oxide in midwifery procedures and otolaryngological operations, using the McKesson apparatus. In general surgical operations, however, he employs ethylene. A very simple Foregger apparatus is used, fitted with a soda-lime carbon dioxide absorber designed by Waters and extremely easy of operation. A portable apparatus, on these lines, is indeed of "midget" size. Carbon dioxide absorption (the so-called "filtration") gives good results, especially with ethylene. Waters practises endotracheal methods to a greater extent than most American anæsthetists, who have not readily adopted the technique. He uses a low pressure, closed circle method: the glottis is wholly occluded by the Guedel-Waters inflatable cuff, and respiration occurs up and down the catheter and through soda-lime.

The anæsthetic service of the Mayo Clinic, at Rochester, Minnesota, is directed by Lundy and two colleagues (Tovell and McCuskey). The routine anæsthetic agent is ethylene-oxygen with abundant ether, given by nurse anæsthetists with the Lundy-Heidbrink apparatus. The nurses aspire to but little originality and resource, although they are well trained in technique and the keeping of continuous anæsthetic sign charts. The doctor anæsthetists have little contact with gas anæsthesia, other than to effect endotracheal administrations, which are done after the method of Magill. The main province of Lundy and his assistants is regional and spinal anæsthesia, where the surgeons are very ready to seek their masterly services.

Somewhat parallel conditions exist at the Lahey Clinic at Boston, Massachusetts. Ethylene is administered from Lundy-Heidbrink or Foregger "metric" apparatus by nurses, the chief anæsthetist (Sise) and his assistant (Woodbridge) being largely concerned with regional anæsthesia.

At New Haven, Connecticut, ethylene is administered from the Foregger "metric" apparatus with Sword's carbon dioxide absorber. This, employed also at the Lahey Clinic, has the great advantage over the Waters absorber that carbon dioxide absorption can be fractionated. Sword administers ethylene by the endotracheal route, after

the Madison technique, but uses his own carbon dioxide absorber.

In New York ethylene is employed by numerous medical and dental anæsthetists, largely as a result of the enthusiasm of Gwathmey (a pioneer worker in gas anæsthesia) for this drug.

Other Anæsthetic Gases.

Acetylene has found a certain use in anæsthesia, mainly in Germany, under the name of "Narcylen." Gauss, of Würzburg, and Killian, of Freiburg, are the leading exponents, and the writer is indebted to the latter for opportunity to administer this gas. Acetylene much resembles ethylene as an anæsthetic, but is more potent, more toxic and capable of greater admixture with oxygen. Its last named quality has led to its use in certain German clinics as a substitute for the more costly and often contaminated ethylene. The risk of explosion exceeds even that of ethylene, so great care is taken to moisten the gas, to keep the cylinders outside the operating room, to remove the exhaled gases from the mask to without the theatre, to avoid admixture with ether and every possibility of static spark or external ignition. Under these conditions acetylene has so far proved safe: it is doubtful, however, whether it possesses real advantages over ethylene or is likely to gain favour in lands where a cheap and reliable supply of ethylene is obtainable.

The writer, when in Madison, Wisconsin, was fortunate in seeing some experimental work by Waters upon the closed system of administration of cyclopropane (C_3H_6). This gas resembles its ally, ethylene, and is capable of free dilution with oxygen; it appears, however, to be somewhat depressing. Its formula would seem to indicate structural instability, but its liability to explosion is as yet undetermined.

The Choice of the Anæsthetic Gas.

Neglecting at this time acetylene and cyclopropane, we may analyse the indications for preferring either ethylene or nitrous oxide in any given case. The field is debatable, and partisanship runs high therein. Indeed, the three anæsthetic congresses held in America in 1930 did little beyond stating the case on either side. One may sum up the cardinal advantages and disadvantages of each gas as follows:

Nitrous oxide is odourless, tasteless, very speedy in action and exceedingly quickly eliminated from the body. It causes little depression and the minimum of after-sickness. Given an efficient apparatus and a skilled administrator, it produces greater muscular relaxation than is generally recognized. It has no parenchymal action, and hence does not injure the vital organs. It produces its best results, however, within a relatively narrow margin between consciousness and anoxæmia, and the keeping of anæsthesia within these limits is a good test of the man and the machine.

Ethylene is a slower-acting drug; hence it is less dependent upon the apparatus and upon the administrator for good results. It produces deeper narcosis than nitrous oxide, and is possibly of somewhat greater toxicity. Elimination is slower and after-sickness rather more pronounced. Muscular relaxation is probably rather greater than with nitrous oxide. Indeed, ethylene seems to lie between nitrous oxide and the lipoid-solvent anæsthetics such as ether; it has been said that to its lipoid-solubility and its rapid elimination its peculiar qualities are attributable. It does not cause injury to parenchymal organs. Its odour is unpleasant, but the rapid onset of unconsciousness which it produces, discounts this objection. An advantage of ethylene seems to lie in the high percentages of oxygen which may be administered with it. Finally, ethylene is highly explosive when admixed with certain percentages of oxygen, whereas nitrous oxide is wholly uninflammable.

The danger of ethylene explosion is possibly overrated in relation to the number of administrations, and is perhaps no greater than with ether-oxygen. Many explosions have been attributable to gross carelessness in respect to external sources of ignition of the anæsthetic mixture. Other cases may have been due to the generation of a static spark within the apparatus. In the intense cold of a North American winter static sparks are a very real danger; it is doubtful, however, whether parallel conditions ever exist in Australia. Water flow-meter machines are said to confer additional safety against explosion. If a static spark be experimentally produced within the breathing bag of such a machine, an explosion will still result. It is possible, however, that water flow-meter machines are less likely to build up internal static charges (as apart from externally introduced static) than are dry flow machines. Internal static would not seem to be a great danger in the Australian climate; the writer admits to more fear of external ignition than of internal static. Hence, not being able to control all the conditions under which he works, he prefers to use nitrous oxide for all cases in which ethylene is not specially indicated, as it possibly is in the cyanosis of severe respiratory or cardiac disease.

If ethylene be preferred, however, certain precautions would seem to be indicated. All naked flames, sterilizer lamps, cauteries, diathermy points and other sources of ignition should be avoided. Lamp switches should be turned on and off with caution, and always outside the area of gas inflammability, that is, outside a radius of a foot from the exhaling valve of the mask (Cheney). The anæsthetist, by contact, should "ground" the patient, operating table, gas apparatus and himself before starting the flow of anæsthetic mixture. The apparatus should be adequately "grounded" by an intact wire to, for example, the nearest water pipe. The anæsthetic mixture should never contain an excess of oxygen, since such a mixture is explosive, whereas a mixture poorer in oxygen is merely inflammable. For this reason, sudden "washing-out" of the patient with oxygen at the end of operation is better avoided. Many American authorities

advise that induction and termination of anæsthesia should be accomplished with nitrous oxide, ethylene being reserved for the intermediate period. Finally, it is undesirable to use the same reducing valve for both nitrous oxide and ethylene. The actual type of apparatus employed seems of less importance, especially if breathing tube and rebreathing bag be moistened prior to administration. Ethylene certainly explodes with terrifying violence, but, with due precautions, the risk seems one which may well be taken in those cases where ethylene is particularly indicated.

Anæsthetic Apparatus.

In England many makes of English apparatus are employed, for example, the Boyle, Walton and Magill. The last named is especially portable. The Walton apparatus is of intermittent flow pattern, the others of continuous flow. American machines are widely used in England and certainly gain in structural refinement and mechanical ingenuity.

Imported apparatus proving too dear, the Germans avail themselves of locally produced machines. Since German conditions do not demand portability, the local machines are generally lacking in refinement and are large and cumbrous. The two best are the Killian and Schmidt-Sudeck-Dräger apparatus. The former is a continuous-flow, water flow-meter machine, somewhat resembling a simplified Foregger apparatus, and designed for use with acetylene and ethylene rather than nitrous oxide. The Schmidt-Sudeck-Dräger apparatus is a rather bulky dry flow machine, with provision for carbon dioxide absorption and free addition of ether. Both machines function well, though the exigencies of pressure anæsthesia are inadequately met. There seems to be in Germany a lack of small portable machines for minor operations and painful dressings.

American apparatus is bewildering in its variety and its technical excellence. Comparisons being invidious, the writer offers only personal predilections. For nitrous oxide he prefers a quickly reacting, dry flow machine with a capacity for delivering the gas under considerable pressure where necessary. Excellent results may be obtained from various such machines, for example, the Heidbrink. The writer admits to a partiality to the McKesson apparatus, in virtue of its simple, delicate control, its rapid reaction, its capacity for delivering a constant mixture under widely varied pressures, its fractionated rebreathing and its automatic recording. For ethylene the water flow-meter machines (whether they be safer or not) give results comparable with the dry flow apparatus, because rapid reaction is less necessary with ethylene than with nitrous oxide. These machines are admirably adapted to the closed circle carbon dioxide absorption technique. Of many excellent flow meter machines one may mention the Gwathmey, Safety-Gas and (last, but not least, because of its accuracy) the Foregger "metric" apparatus. For endotracheal insufflation anæsthesia a machine capable of delivery at high pressure is necessary. For endotracheal inhalation, however, both water flow and dry flow machines are suitable. For dental and oral surgery a machine capable of pressure is very advantageous, though perhaps not obligatory. In every administration a well-fitting mask is imperative, and the McKesson type of mask is to be commended. Whatever apparatus be selected, it is essential that the user be fully master of the technique and of the instrument. In the last analysis gas anæsthesia remains a matter of "the man behind the gun."

Gas Anæsthesia of Tomorrow.

The Australian anæsthetist is faced by the problem, already solved by his colleagues overseas, of proving to the profession that he makes no exaggerated claims for gas anæsthesia; that it is in fact the most pleasant, the safest and the most free from complications of the inhalational anæsthetics. Despite the present economic conditions, the public is not without dawning recognition of the value of gas technique. What the public desires, what the surgeon expects, that must the anæsthetist supply. The specialist anæsthetist, however, will not rest content that the lead should come from this direction; he will insist that he himself shall educate his colleagues and the public in the most modern technique.

The modern anæsthetist finds himself on the threshold of a new era in anæsthesia. He visualizes the time when an up-to-date gas apparatus, a centralized supply of gas and a trained gas anæsthetist will be as much a commonplace of the operating theatre as the ether anæsthetist is today. He looks beyond this to a wider ideal: to a conception of the anæsthetist as a specialist in every form of anæsthesia, in every form of pain relief, in every phase of the therapy of gases. He sees the anæsthetist of tomorrow as an equal partner in the surgical unit, sharing its responsibilities no less than its privileges; as the custodian of the patient's life upon the operating table; as the guardian of the patient's health, both before and after the operation. He sees the anæsthetist, in such realms as pain relief, therapeutic nerve block and oxygen therapy, as the colleague of the physician, and as a valued link between the medical and surgical services. Finally, he sees him as no less a research worker than a practitioner. When he has realized this ideal, he can contemplate the prospect of an anæsthetist who is a specialist indeed, and of anæsthesia which is no longer the Cinderella of the medical sciences.

CHOPIN AND HIS FOURTEEN DOCTORS.

By KEITH L. BARRY, M.B., Ch.M. (Sydney),
Leura, New South Wales.

IT has always been a legend of musical literature that Frederick Chopin was a sickly tuberculous figure who was more or less of an invalid from the day he was born. Many a maidenly tear has been shed

over the sad tale of his valiant struggle against the forty-year long onslaughts of that acid-fast bacillus that has reaped an abnormal harvest amongst the brilliant ones of the earth. Many a music-teacher has explained to a duly impressed student how Chopin would struggle from a sick bed to dash off a priceless morsel of inspiration and then return exhausted till genius urged him forward once again.

It is difficult to get accurate information about Frederick Chopin. Some twenty-five literary sources of knowledge exist, but all the biographies are notable for the absence of personal descriptions of their main character. Most of the evidence is second-hand and what there is of first-hand evidence does not seem to be particularly enlightening. Chopin's friends contradict one another with just the same enthusiasm as do anatomy professors arguing over mortal remains. One friend says how thin and wan he looks on the same day as another thinks he has never looked better. Chopin, that unsurpassed genius of the piano, seems to have been one of those dreamy, intangible personalities whom no one understands and who defies all efforts to pierce the veil of natural aloofness. Even George Sands, who knew him better than anyone, never really reached the man behind the man.

The medical history of the Chopin family is fairly good for the times in which it lived. The father and mother lived to a ripe old age, though one writer warns us that the father, who suffered from chest trouble, died at the age of 75 years from tuberculosis! Whilst admitting the possibility, the probability is not sufficiently great to worry a medical biographer very seriously. A man who lived to the age of 75 a hundred years ago might reasonably be expected to exceed that span by ten years today. There were four children in the family, one of whom died of "chest trouble" in her early teens. The father was Professor of French at the Warsaw High School at the time of Frederick's birth in 1810, but soon afterwards he opened a private school for "children of the rich." It is reasonable to assume, therefore, that there was no shortage of food or warmth in Chopin's childhood days. He was a merry high-spirited child, passionately devoted to the rest of the family and, above all, to his mother. It is therefore also reasonable to assume that he was well cared for.

The first medical fact we find is that Chopin was a very pale child. Just how much importance can be attached to that statement is difficult to ascertain. Probably a very great number of Warsaw children were very pale a hundred and twenty years ago. Chopin was a musical genius who spent considerable time at the piano. He was fond of playing with the other children, but the piano claimed him when it would have been better for him had he been out in the open air. His genius was known far and wide, and at quite an early age he played before royalty. The very great effort and concentration necessary before one can be a successful pianist is not recognized by the average person. Such an effort is often deleterious to the health of a young child unless the strictest precautions are taken.

Chopin's youth seemed to pass without any untoward medical happenings. Someone remarked that he was very white and sickly on the occasion of an important recital that he gave when nineteen years of age. I have seen many perfectly healthy young people of nineteen so white and sickly at a recital as to have required a medicinal alcoholic stimulant before they could proceed on to the platform! In any case, on this particular occasion, the orchestra which had been engaged could not read Chopin's newly-composed "Variations" and the whole programme had to be altered. Is it any wonder, as another commentator remarks, that the young composer was "white with rage about the whole affair"! In the same year, one of his pupils said that he "had the complexion of a girl." This is a very interesting fact, though quite puzzling. Was the complexion the malar flush of phthisis, or was it the normal bloom of youth? The same pupil remarks that his teacher worked very hard, a fact borne out by Chopin himself who wrote to a friend about this time: "Work drives me on. Often I turn day into night and night into day." Other people support this statement and it is difficult to believe that such a sustained outburst of energy is compatible with the asthenia of fairly advanced phthisis. In a few months, for some extraordinary reason, Chopin thought he was going to die. He expressed himself as being crushed by sadness. As treatment for his mental depression, he used to "roam and roam the streets for hours," surely an impossible task for one about to die from tuberculosis.

Just about this time he made great friends with the court physician, Dr. Malfatti, and used to spend practically every evening with him. Even allowing for the scant medical knowledge of the times, one feels that such a distinguished medical man would surely have noted and reported any grave organic lesions in his friend. Instead, we are just told vaguely that Chopin was very ill and "went travelling," a method of treatment that seems more in keeping with neurosis than tuberculosis. On the other hand, we learn that he had a pale, toneless, indistinct voice, a symptom which is found perhaps more frequently in pulmonary tuberculosis than in other conditions. It is interesting to note that this same Dr. Malfatti was Beethoven's doctor.

Chopin's "illness" was comparatively short lived, for he was soon back in Paris, working as hard as ever. In a few months he wrote to one of his greatest friends: "I have plenty of acquaintances, but no one understands me." Is there a more typical symptom of some forms of neurosis than the oft-repeated complaint that "no one understands"?

We can find little information of medical interest in the history of Chopin during the next few years. What information we have is purely negative and probably all the more valuable, therefore, as an index to his freedom from any form of tuberculosis. We learn, for instance that in 1834 (he was twenty-four years of age then) he went to a music festival at Aix-la-Chapelle where he became very friendly with young Mendelssohn. He was perfectly well and found great happiness in the friendship.

The next year he fell in love with Marie Wodzinski and the two lovers became unofficially engaged. The family of his *fiancée* was a rather important one

and there seemed to be some obstacle in the way of official rejoicings. The engagement dragged on until Marie showed signs of cooling, and, two years later, the affair was declared off; some authors declare that Chopin's "bad health" was the deciding factor. Once again, the medical profession seems to give an unqualified denial of such ill-health, for, as it happened, Chopin was living then with Surgeon-Major Matuszynski, a Professor of the Paris School of Medicine, who announced to a young friend that young Chopin was "tall and broad." Not a whisper was offered about chest trouble. Just prior to the breaking off of the engagement, too, Marie wrote to a dear friend that her Frederick was "quite well and in the best of spirits." All things considered, therefore, it seems far more likely that the engagement, which had never been official, was broken off because of the musician's lowly birth. A hundred years ago a musician entered society in spite of his profession and not because of it, an opposite state of affairs to today when every wandering "virtuoso" is entertained and feted vice-regally.

Chopin fled to London after the breaking of the engagement, and here it was announced that he was "very ill." Knowing how an unfortunate love affair can affect highly-strung young people, and being unable to discover any symptoms at all of his illness, it may be put forward as a fair proposition that there is no evidence at all for the definite statement of one author that "tuberculosis began its ravages at that time." Indeed when Chopin returned to Paris in 1837 the energetic and business-like George Sand (under whose spell he had just fallen) insisted that he should consult the well-known Dr. Gaubert. The learned physician "swore that Chopin wasn't phthisical." Like a sensible doctor, he saw that his patient was working far too hard, teaching all day and composing half the night, so he recommended a holiday in which his patient was to have "plenty of air, plenty of walks and much rest." Sand said that they would have a wonderful holiday all by themselves and suggested that they should go to one of the Balearic Islands. For some reason or other they went separately, and reliable reports state that Chopin, "after four weary days and nights in a rumbling, draughty mail coach, descended as fresh as a rose and as rosey as a turnip," a most unlikely description of a man who was very ill from tuberculosis.

Life on the island was attractive and it was not long before Chopin wrote to a great friend: "Life is delicious here. I am a better man." He took long walks every day and appeared to be very fit. During one of these walks, however, he got caught in a heavy storm; bronchitis supervened (possibly pneumonia), and there was no doubt that he was very ill. There was no nurse other than the masculine George Sand and food supplies were scarce; their house was some distance from the town and the islanders were not at all keen on supplying their wants. It is quite on the cards that Chopin's diet was wholly wrong and his nursing very bad. Whatever the cause, the fact remains that he never really recovered from this illness. Shortly, Sand summoned all the doctors available (three of them) and demanded that they should do something. As there is no record of a doctor having been called during the acute phase of the illness, Sand's solicitation appears to have been a little late.

That Chopin still retained his high spirits is evidenced by his graphic description of the consultation: "One sniffed *what* I had expectorated," he wrote to a Parisian friend, "whilst another tapped me *where* I expectorated, and the third listened *while* I expectorated. The first said I'd die. The second said I was about to die, and the third that I was already dead."

It was apparently not the custom to spare the patient's feelings in the Balearic Islands! The treatment, too, seems to have been most unfortunate, for Chopin goes on to say: "I was barely able to escape their bleedings and cuppings and such like operations." One wonders what was covered by the suggestive term "such like operations." He ends, not without grim humour, "But now, thank God, I am myself again."

At this stage, just about the worst thing that could possibly have happened to a potential consumptive happened to Chopin. Both his fortune and that of Sand were at a very low ebb. They even lacked mattresses and cooking pots. There was no stove and they had to use "asphyxiating braziers which made the invalid cough incessantly." Finally, to add to their woes, Chopin became an object of horror and fear to the islanders who refused all service. The landlord was told that his tenant was tuberculous and evicted him and his companion. On December 15, 1837, they set out for a ruined monastery close to Palma where they lived in cells with tiny windows. Is it any wonder that after some months here, Sand wrote that Chopin was very exhausted and still coughed a great deal? His iron constitution, however, came to his help and we find that he worked very hard at his compositions, day after day and night after night. One night, "a thousand ghosts invaded the monastery led by a horned devil, dressed in black, with a face the colour of blood." It was only the villagers celebrating Shrove Tuesday in the usual Balearic style, but the shock to Chopin was tremendous and from that time onward the monastery became full of phantoms. Sand, to make matters worse, went off for long tramps during the day, leaving him to get his own lunch (which he probably did not get at all); his mental state became occasionally abnormal. One night, Sand came back after a long day's outing and found him sitting white and haggard at the piano. It was several minutes before he recognized her. It is interesting both to musicians and to medical men to learn that it was during this period that he wrote some very beautiful "preludes."

Since his condition failed to improve, Sand decided to take him back to Paris. The islanders refused him transport for fear of infection and he was taken the three leagues to the boat in a wheelbarrow. At Palma he had his first hæmorrhage and the next day, at Barcelona, had another, during which he lost "a full bowl of blood." The surgeon of the sloop of war *Méléagre* attended him,

ordered eight days' rest, and said that there was quite a good chance of recovery. A doctor in Marseilles ordered him to the south of France where he was placed under the care of a Dr. Couvières, who "regularly sounded his lungs and made him wear cupping glasses. He put him on a suitable diet and soon pronounced him on the road to recovery."

Chopin's condition improved very quickly and in the following year the pair went to Genoa where Dr. Papet, an old friend of Sand, examined him and said that he only had a chronic laryngitis. He ordered plenty of rest and a long stay in the country. The rest was taken in spasms for he composed a great deal of magnificent work here, including the "Sonata in B minor." He improved so rapidly and satisfactorily that he was pronounced cured, with the result that they all returned to Paris, where Chopin immediately plunged into an orgy of work. He took as many pupils as he could fit into the day and was "full of mental vigour." One day he sat down at the piano for one of his pupils and played from memory 14 of the larger preludes and fugues of Bach. Anyone with a rudimentary knowledge of music will agree that that was a feat which must have entailed many hard hours of constant practice. So, teaching all day, practising and composing most of the night, Chopin attempted to fight the tubercle bacillus. He would get a craze for composition and "would lock himself up for days and nights at a time, ignoring pupils and everyone else, weeping, walking up and down, shattering his pen, going over a single bar a hundred times if necessary." So for three years he lived thus, working up to eighteen and more hours a day, having scrappy and infrequent meals, doing without fresh air and exercise, sleeping a disgracefully small number of hours, and, in fact, doing everything possible to invite the attentions of bacterial enemies. As late as 1844, five years after his initial hæmorrhage, George Sand wrote to his sister. "His health has changed little in six years. He has one strong paroxysm of coughing in the morning, but, for the rest, his chest is healthy and his delicate organism knows no lesion." He went climbing mountains near the Creuse, slept on straw and never felt better.

The next year he had "persistent bronchitis" and, the year after, caught influenza, from which he appeared to recover completely. In 1846 he was again working at fever pitch, but in the wintry November weather he suffered the mental agony of a definite break with George Sand. The pair were staying out of Paris, and Chopin in that soft, husky voice of his offered to leave. Sand did not oppose the offer and the mentally-upset composer set off for Paris. He never got over this severe mental disturbance and in May, 1847, he was taken seriously ill. He recovered again, but was weak and ill soon afterwards, complaining to George Sand's daughter: "I feel suffocated and have headaches." He was plainly ill now, and, worse still, quite dispirited. Visiting a friend one day he met Sand as he was going down the stairs. They spoke and passed on. "I would like to have gone back," he said to a friend, "but going up stairs was such a painful business for me."

Instead of going to the country to rest and recover again, Chopin sought refuge in work. He took his pupils back again and, in 1848, his splendid vitality enabled him to "arrange a great many lessons" as well as give one of his rare concerts in Paris. Then he went to London and settled down in Dover Street. He picked up at once, looked and felt better, breathed much more easily and was out late every night. He gave lessons every day. Then he began to spit blood and felt weaker, in spite of which he made a notable appearance before Queen Victoria and no less than eighty titled folk. He was persuaded to go to Scotland by one of the guests so that he could rest. As usual, on being given the slightest chance, he improved at once and wrote that he was very well. "I have peace, and sleep," he said, simply but enlighteningly.

Financial difficulties worried him, his wonderful compositions brought him very little money, and he felt that he ought to be at work again. He was always sturdily independent and once before had refused a sum of money that a sympathetic friend had tried to force on him. So he arranged a tour of England and Scotland (and it had to be undertaken in stage coaches, not trains) reaching Edinburgh in October. He had to be carried upstairs when he arrived there, and there was no doubt that he was desperately ill. He gave his concert, however, and then went back to London where he took to his bed for a few weeks. As soon as his breathlessness and headaches left him he got up and went to Edinburgh, and then rushed back to London again to give a concert in aid of the Poles! Then he went back to Paris where he felt that the end was near. He was too ill to teach, lost all inspiration to compose and "saw death everywhere." He was penniless and his friends once again tried to force money on him, only to be met with a curt refusal. In the sunny month of June he wrote to his favourite sister: "If you can, come . . . I am ill." Then he added a very interesting medical statement: "I have no fever, which disconcerts and vexes all the ordinary doctors." These "ordinary doctors" were Roth, Louis and Simon (a homœopath).

Chopin evidently developed the ordinary tuberculous laryngitis, for, six weeks after this letter he hardly spoke, making himself understood by signs. Three doctors were in attendance, for Chopin, though penniless, was now an international figure. Doctors Louis, Cruveillé and Blache, after a long consultation, decided that a change to the south of France would be useless. Two months later he could not sit up and in October he died. The last twenty-four hours of his life, with the story of the opera singer who rushed from Nice to give him a few moments' pleasure in a song, are intensely pathetic, but can find no place in what is purely a medical history.

On the evidence, I submit that Chopin only suffered from tuberculosis as a sequel to badly-nursed, untreated, pneumonia. In fact, there is every reason to think that he had an exceptionally strong constitution which enabled him to fight any disease with exceptional vigour. His hæmorrhages started ten years before his death and there is every reason to believe that the disease was entirely arrested and that he would have lived many years longer with proper rest, care and diet. It is

significant that every doctor who saw him, prior to his primary acute bronchitis or pneumonia at Palma, was insistent on the fact that he had no trace of tuberculosis. There is no medical evidence of tuberculosis till he went to Palma, and it is extraordinary that everyone except his doctors should assert that he was a victim to it.

The psychological life of Chopin is something on which I do not feel competent to comment in these days of psychiatry specialists. He was obviously what we call "neurotic" and of a vital, intense personality. His relations with George Sand were extraordinary and Sand wrote when he left her that "for seven years I have lived like a virgin with him," a statement which the absence of any children of the alliance helps to support. It is known that Chopin was passionately devoted to his own mother, and who knows but that his love for Sand, a woman much older than he was in ways as well as years, was an example of the mother-fixation theory of attraction? It is hard to explain otherwise what would cause such an essentially refined and quiet personality as Chopin's to be drawn to someone with the character and eccentricities of George Sand.

ACKNOWLEDGEMENT.

I am specially indebted to the French authors M. G. de Pourtales and M. Henri Bidou for their searching biographies of Frederick Chopin.

A COMPARISON OF THE KLINE AND WASSERMANN TESTS.

By PHYLLIS G. ASHWORTH, B.Sc.,
Melbourne;

AND

DOROTHY H. IRVING, B.Sc.

(From the Baker Medical Research Institute, Alfred Hospital, Melbourne.)

THE object of this report is to add to the already existing statistics of a test which appears to be a simple, reliable and rapid method of assisting in the diagnosis of syphilis. The report is given in sufficient detail to enable those interested to carry out the test. The work is the direct result of a suggestion in the report from the Newcastle Hospital, New South Wales,[6] that the Kline flocculation test should be further investigated in Australia.

It has long been the aim of serologists to evolve a method less cumbersome than Wassermann's for testing a suspected syphilitic serum. Among such procedures the Kahn and the Vernes tests are considered to be the most reliable, but both suffer from obvious disadvantages, in that they take some hours to perform, require a certain amount of laboratory experience, and, in the case of the Vernes test, the apparatus is bulky and expensive. In most laboratories the length of time required precludes the carrying out of these tests more often than once or twice a week. Claims of accuracy and simplicity have been made for the Hinton test also, but at the present time the Wassermann test is, and seems likely to remain, the standard among laboratory procedures.

The Kline modification of the Kahn test was first described in 1926.[1] Since then Kline has elaborated the method whereby diagnostic precipitation tests for syphilis may be performed on heated serum, unheated serum, defibrinated finger blood[2] and on cerebro-spinal fluid.[3]

Johnson,[4] in America, reports on 1,500 Kline tests, Hamilton[5] gives a preliminary report on its use in Australia on 246 cases, and Durie[6] gives a comparison of 720 Kline and Wassermann tests, also performed in Australia, while Kline has reported on approximately 12,000 tests. In each case the conclusions arrived at are that the Kline test is easier to perform, is slightly more sensitive than the Wassermann test, and appears to be as specific.

The material for this report has been assembled from two different sources: (i) the private records of one of the writers and (ii) all serum submitted to the Wassermann test at the Baker Medical Research Institute, Alfred Hospital, during a period of about five months. Definitely suspected infections, routine tests and treated patients from the venereal diseases clinics are therefore included, so that the material handled may be considered as representative. The Kline tests and a small proportion of the Wassermann tests were done by one of us (Ashworth), the remaining Wassermann tests being done by the other (Irving).

Methods.

The Wassermann test used was Method Number IV of the Medical Research Council,[7] with slight modifications, all positive serum being set up in at least six dilutions of the patient's serum, the strongest being a dilution of one in five. The Wassermann results are reported according to the number of tubes in which there is a complete inhibition of hæmolysis, that is, "+ +" indicates a complete inhibition of hæmolysis in two tubes, "+ + ±" complete inhibition in two tubes and a partial inhibition in the third.

The Kline test was performed as described by Kline and Young in their original article,[1] the very sensitive antigen emulsion being used. The antigen used in our series was that supplied by the Commonwealth Serum Laboratories in one cubic centimetre ampoules. It was found unnecessary to use the humidor, provided the laboratory atmosphere was moist. A wide range of temperature and atmospheric conditions have not affected the results obtained.

Kline's interpretation of the results obtained by his method is: Using the very sensitive antigen emulsion, "+ +," "+ + +" or "+ + + +" is diagnostic of syphilis, whilst a "+" can be taken as diagnostic only in the very early stage of the disease, when the Wassermann test would still fail to yield a reaction.

In view of this, it is of interest to note that in the results dealt with in this paper a Kline "+" has only occurred with a failure of reaction or partial

Wassermann reaction, or in treated patients or those with congenital syphilis. Therefore it is of interest to the serologist to be supplied with some history of the case, namely, whether a chancre is suspected or whether the diagnosis has already been established and the result of treatment is being looked for. A consideration of the history of the case will reveal whether the "+" result of the Kline test is an indication for the beginning of treatment pending further developments and the report of the Wassermann test, or for the continuance of treatment.

TABLE OF RESULTS.

Comparison between 1,000 Kline Microscopical Slide Tests and 1,000 Wassermann Tests.

Result.	Number of Tests.	Percentage.
Qualitative agreement	983	98·30
Disagreement—		
(a) Absolute	4	0·40
(b) Relative[1]	13	1·30
Total	1000	100·00

The disagreement may be analysed as follows.

	Kline.	Wassermann.
Relative disagreement (thirteen cases)—		
Six patients undergoing treatment	++	—
Four patients undergoing treatment	+	—
One patient undergoing treatment	—	±
One congenital syphilitic ..	++	—
One congenital syphilitic ..	+	—
Absolute disagreement (four cases)—		
Aortic aneurysm	++++	—
Stricture of the rectum	+++	—
Pulmonary fibrosis[2]	—	+++
Terminal dementia and chronic nephritis	—	±+++++

[1] By relative disagreement is meant disagreement due only to a difference in sensitivity of the two methods. There was a known syphilitic lesion in each case.

[2] It is of interest to note that this serum gave a negative Kahn reaction.

The heavily outlined area in the accompanying chart includes those squares in which most of the results would be expected to lie if the relative strengths of the two methods were in agreement.

	WASSERMANN NO REACTION	P±; P+	P+±; P++	P++±; and over
KLINE NO REACTION		1[1]		2[1]
P+	5[1]	24	4	2
P++	7[1]	36	18	8
P+++	1[1]	13	16	26
P++++	1[1]	3	5	96

1. These results have been analysed under the heading of disagreement.

Actually 81% of the positive reactions fall in this area, showing a moderate measure of quantitative agreement.

The Kline Test.

The apparatus required is as follows:

Scrupulously clean glass slides.

One cubic centimetre pipette, graduated in 0·01 cubic centimetre, for measuring serum.

One special pipette for measuring antigen. (One of the above one cubic centimetre pipettes was drawn out to a fine point so that each drop delivered is equivalent to 0·0075 cubic centimetre, that is, 62 drops per 0·5 cubic centimetre.)

Rubber teats to fit on the end of pipettes.

Instrument for making paraffin rings. This is essentially the instrument proposed by Green.[6] A piece of soft iron wire (number 28) is wound twice round a test tube of outside diameter 15 millimetres. The double thickness of wire is then bound tightly with linen thread and the free ends of wire twisted once or twice and inserted into solid glass tubing. The loop is then bent back at right angles to the shaft.

The test proper is carried out in the following way:

The blood to be tested is allowed to clot and the serum is then pipetted off. It must contain no red blood corpuscles or *débris* and should show as little hæmolysis as possible. A previously tested positive and a non-reacting serum, together with the serum to be tested, are incubated in a water bath at 56° C. for thirty minutes. The temperature must remain constant, and it is advisable to have a special water bath regulated at 56° C. for the purpose.

Paraffin rings are now made on glass slides by dipping the special instrument into smoking paraffin (about 120° C.), draining quickly at one point, and then placing flat upon the slide. Four rings will be found to fit on each slide.

The antigen, if not already prepared, should now be made up in the following manner:

1. Into a one-ounce bottle, fitted with a cork covered with tinfoil (thick silver paper is effective) is pipetted 0·85 cubic centimetre of distilled water.

2. One and a quarter cubic centimetres of 1% cholesterol solution are run in slowly, the bottle being held at an angle of 45°. The bottle is then rotated from the neck for about fifteen to twenty seconds. [The cholesterol solution is prepared in about forty-five minutes by placing a weighed quantity of Merck's cholesterin in the required quantity of absolute alcohol (99%) and heating, with frequent shaking, in the 56° water bath till solution takes place. This keeps indefinitely.]

3. The bottle is held at an angle again and 0·10 cubic centimetre of antigen is run down the side. The stopper is replaced and the contents thrown back and forth against the cork for sixty seconds.

4. Two and one-fifth cubic centimetres of 0·85% saline solution is run in quickly and the mixture shaken for thirty seconds.

This antigen remains specific for three days and must be kept at room temperature.

The sera are now removed from the water bath, allowed to cool and, with the one cubic centimetre pipette, 0·05 cubic centimetre of each serum is placed on the slide in a paraffin ring. The pipette is rinsed between each serum, twice with boiling water and twice with normal saline solution.

With the special antigen pipette, one drop of antigen is delivered on to each serum. The mixture is thoroughly stirred with the wooden end of a match, each match being discarded after stirring. When the four sera on the slide have been so treated, the slide is picked up and gently rotated in the two hands about sixty times. Thorough mixing is now insured and the clumping of the emulsion in a positive serum will be readily visible to the naked eye.

Examination under a microscope with the low power lens is necessary to reveal a fine even emulsion in a non-reacting

serum and clumping of the particles of the antigen in a positive serum, the size of the clumps varying with the strength of the reaction. Illustrations of this are given in the report of Kline and Young.[1]

Summary.

1. This series would suggest that the Kline test and the Wassermann test show very close qualitative and a less close quantitative agreement.
2. The Kline test appears the more sensitive in treated cases.
3. The simplicity and rapidity of the Kline test make it very valuable where conditions render a Wassermann test difficult or impossible.
4. A report based on the Kline test may be given within half an hour.
5. Small amounts of blood only are necessary.
6. It is an advantage to test a serum by more than one method.

Acknowledgements.

We wish to thank Dr. W. J. Penfold, Director of the Baker Medical Research Institute, for the interest he has shown in the work; also Miss Hildred Butler, of the Baker Institute, who was responsible for some of the routine Wassermann results.

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(4) Johnson: *American Journal of Syphilis*, April, 1928.
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(6) Beatrix Durie: "The Kline and Young Modification of the Kahn Flocculation Test for Syphilis," "Transactions of the Australasian Medical Congress (British Medical Association)," Third Session, 1929, page 484.
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Reports of Cases.

AN INTERESTING CASE OF TRAUMATIC PARAPLEGIA.

By ERIC L. COOPER, M.D. (Melbourne),
Medical Superintendent, Melbourne Hospital.

THE following patient was admitted to the Melbourne Hospital, and the history presents some features unusual in a traumatic spinal cord lesion.

Clinical History.

Eric G., aged thirty-four, married, by occupation a clerk, was admitted on December 6, 1930, following a motor accident in which the patient was pinned beneath the car, the weight of the car resting on his chest. He was unconscious for a short period of time, and on recovering found himself unable to move his legs voluntarily. The patient was conscious of his legs, knew that they were in the extended position, and could feel the weight of the bedclothes upon him. Further, he had complete memory up to the time of the accident, remembering the car overturning, but did not remember the car actually pressing upon his chest. No urine had been passed since the accident, nor had the bowels been open.

Previous history was unimportant, but he had been rather "nervous" in the last few months.

On admission the patient, a stout male, was sweating slightly. His temperature was 35·9° C. (96·6° F.), his pulse rate 84, and his respirations numbered 84. The systolic blood pressure was 86 and the diastolic pressure 60 millimetres of mercury. The urine had a specific gravity of 1·025, it was acid and a trace of albumin was present.

General examination disclosed fractured ribs on both sides of the chest, with some bruising over the sternum. Diminished breath sounds and diminished resonance to percussion were present at the right base. The abdomen was slightly distended.

The spine showed bruising about the upper thoracic region, with diffuse tenderness over the upper thoracic vertebræ. There was no localized tenderness or noticeable deformity in the spine.

Examination of the skull, brain and upper extremities revealed no abnormality. Paralysis of both lower limbs of the flaccid type was present, although the muscles still retained a certain degree of tone. The rest position was in extension with slight external rotation of both lower limbs. No voluntary or spontaneous movements of lower limbs were detected.

Plantar reflexes on admission one hour after the accident were of the extensor (Babinski) type, the definite extension dorsally of the great toe was accompanied by a brisk withdrawal of the whole lower limb with flexion at the hip and knee, and dorsiflexion at the ankle. There was no accompanying movement of the contralateral limb; the area from which this response could be obtained was confined to the sole of the foot and was of the same type on both right and left lower limbs. The knee jerks were equal and active, in fact were regarded as of normal type. The ankle jerks were not present. Cremasteric reflexes were active, but superficial abdominal reflexes were absent.

Twenty-four hours after admission the plantar reflexes were of the flexor type, the great toe definitely became flexed on stimulation of the foot, but this was accompanied by some slight fanning of the toes, and with an attempted general flexion withdrawal of the whole lower limb. After this flexion withdrawal the limb extended apparently by muscular action rather than simply falling by gravity. At no time was this reflex accompanied by passage of urine or sweating of the extremity, and at no time could it be elicited from any other area than the sole of the foot. There were some involuntary movements of the lower limbs, usually of a flexor type.

Forty-eight hours later the neurological signs on the motor side remained practically unchanged, with the exception that the ankle reflexes were now present.

Owing to the number of fractured ribs it is impossible to say whether there was any intercostal muscular activity or not—respiration seemed mainly of diaphragmatic type.

In regard to sensory signs, the patient complained of a feeling of paræsthesia from the ninth dorsal spinal segment caudally. The sensation was described as a tingling numbness, not of painful type, and uniform throughout the lower limbs and lower portion of the trunk. On detailed examination there was some loss of muscle and joint sensation. While aware of the position of his joints, knowing the lower limbs were in extension or in flexion, as the case might be, and accurately detailing the position of the big toe on movement, the patient showed delayed appreciation of fine degrees of movement of the toes. Two-point discrimination was reduced in accuracy, but was still present to a certain degree. Heat and cold sensation was completely lost below the ninth thoracic segment, both fine and coarse degrees being tested. Discrimination between the head and point of a pin was also lost, and no pain was felt on maximum stimulation with pin point. Tactile localization was accurate, the patient indicating to within half an inch a point touched with pin or cotton wool. Pressure sensation was also present and accurately localized. The sensory signs remained unchanged until the day of death.

In regard to visceral reflexes, the patient passed no urine and his bladder was catheterized four hours after admission. There was no sensation on emptying the bladder. The bladder was catheterized thrice daily; but forty-eight hours after admission urine was passed into

the bed automatically, the patient being conscious of the urine after its passage, but unaware of any sensation of the bladder emptying. Bowels were not open naturally, nor was there any incontinence of fæces. A marked degree of sweating was obvious on the face, upper limbs and upper part of the thorax and to a less extent below the ninth thoracic segment.

The patient's general condition became gradually worse. Vomiting commenced, the abdomen became distended, and the patient finally became slightly cyanosed. Death occurred seventy-seven hours after admission.

X ray examination revealed a compression fracture of the seventh dorsal vertebra with marked wedging of the body.

Autopsy Findings.

Post mortem examination revealed fracture of the sternum in two places, with mediastinal hæmorrhage. The second to the ninth ribs, inclusive, on the right side were fractured in the axillary line, and the second and third ribs on the left side were fractured in the axilla. The rib ends had not penetrated the pleura. The right pleural sac contained dark fluid blood in large amount, the left a small amount of blood. The lungs were greyish-black in colour, both showing extensive collapse and œdema, particularly on the right, but no pulmonary laceration. The stomach and intestines were enormously distended—paralytic ileus.

Examination of the spine revealed a large amount of bruising and extravasation of blood into the subcutaneous and muscle tissue over the seventh dorsal vertebra. The laminæ were intact. The body of the seventh dorsal vertebra was extensively fractured without displacement, but with compression anteriorly of the body. There was a large amount of hæmorrhage extending from this region upwards and downwards along the anterior longitudinal ligament. The posterior longitudinal ligament showed some bruising and hæmorrhage. The spinal canal showed no obvious deformity or constriction by hæmorrhage *et cetera* (see accompanying figure).

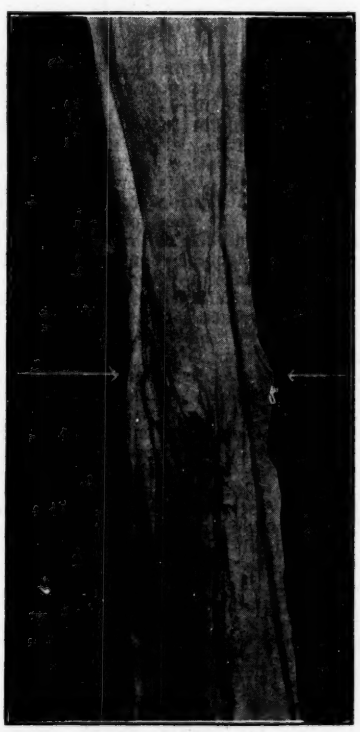

FIGURE I.
Spinal cord, showing the lesion.

An obvious depression in the contour of the spinal cord was noticed at the level of the seventh dorsal vertebra. On opening the dura there was no intradural hæmorrhage, but in this region the cord showed a constriction with rupture anteriorly of the *pia mater spinalis*. Spinal cord tissue was free in the subarachnoid space, and on section the cord showed extensive hæmorrhage anteriorly and around the central canal; elsewhere the macroscopical appearance was normal.

Sections for microscopical examination were taken of all levels and stained with hæmatoxylin and eosin, and by Bielschowsky technique. Frozen sections at all levels were stained by Sudan III. At the level of the tenth dorsal segment the cord showed extensive necrosis and hæmorrhage. There was no cellular reaction. The presence of degenerated myelin in any section was not conclusively proved.

Comments.

Points of interest in this case are:

1. The almost complete division of the cord, with the retention of some sensation, particularly localization and muscle sense below the lesion.
2. The development of a flexor withdrawal contraction reflex within one hour of the accident.
3. The presence of superficial reflexes (cremasteric) and rapid return of flexor plantar reflexes in spite of almost complete division of the cord.
4. The automatic emptying of the bladder within forty-eight hours of the accident.
5. The damage to the spinal cord in the absence of any marked bony displacement.

Acknowledgements.

In conclusion, I wish to thank Dr. Wright-Smith for the detailed *post mortem* and microscopical work, and also the City Coroner, Mr. Grant, for permitting a *post mortem* examination.

ACUTE OBSTRUCTION OF THE GLOTTIS: A SIMPLE TREATMENT.

By KEITH ROSS, M.S.,
Honorary Surgeon to Out-Patients, Brisbane Hospital.

SOME four years ago, while on the resident staff of the Melbourne Hospital, I had occasion to treat two patients with acute obstruction of the glottis. The method then adopted was so simple and so obvious that I should have imagined it to be widely known and practised. However, as I have not heard of anyone else employing it, and as a surgeon so experienced in emergencies as Mr. Hamilton Bailey does not mention it in his recent book,[1] I am now reporting the cases in the hope that some unfortunates may thus be saved from tracheotomy.

Clinical Histories.

CASE I.—A boy, aged sixteen, presented himself at the hospital with a small abscess in the right submaxillary region, due apparently to a suppurating lymph gland; the abscess was pointing, and under general anæsthesia it was there and then opened by the casualty surgeon. According to this officer's report, alarming stridor immediately developed. At this stage I received an urgent summons, and found the patient extremely cyanosed and making desperate but apparently completely ineffectual efforts to breathe. On insertion of a tracheal catheter introducer, gross œdema of the glottis was discovered, but the insertion of a catheter was an easy matter. The catheter was linked to an intratracheal ether machine, and for two to three hours air was gently pumped to the lungs. On then removing the catheter the patient breathed quite normally, and on the following morning he was allowed to go home.

CASE II.—A woman, aged fifty, was admitted to the hospital from the out-patient department with a carcinoma of the larynx. She had a mild stridor with occasional more severe exacerbations; she was awaiting operation

and her distress was not very great. On the following day I received an urgent summons to the ward and found the patient intensely cyanosed, unconscious and having mild convulsions. It appeared that the sister, not wishing to be an alarmist, had expected this exacerbation to subside as had the previous ones. As the case reported above had been so successful, and as throat surgeons seldom appear to like their patients to have already undergone tracheotomy at other hands, a catheter was passed to the trachea and air pumped to the lungs for a few hours until the surgeon in charge of the patient was available. In this patient œdema was not intense, obstruction being due to growth and inflammatory reaction.

Comment.

From the above it is apparent that this simple procedure is sufficient to tide a patient over an emergency obstruction of the larynx from œdema, inflammation or neoplasm. Quite recently I thought I might have occasion to use it on a patient who, five days after thyreoidectomy, while attempting to cough up some tenacious mucus, developed an alarming stridor. Fortunately, the mucus was ultimately dislodged and the stridor ceased.

Of course this treatment can be adopted only when the appliances mentioned are at hand, but I doubt if there are many hospitals which do not possess them and also which do not have someone on the resident staff who can readily insert a catheter. Quite possibly it is not necessary to pump air to the lungs, but merely to insert a catheter.

Case I furnishes another lesson, namely, the danger attendant on opening even a small and superficial abscess in the neck. Acute œdema of the larynx may be a very rare complication, but I am quite certain that neither myself nor the two house surgeons who observed it, shall ever incise another inflammatory condition in the neck unless we are well prepared.

Reference.

(1) Hamilton Bailey: "Emergency Surgery," Volume II, 1931.

Reviews.

EXAMINATIONS FOR LIFE ASSURANCE.

DR. E. M. BROCKBANK has published a useful volume on the conduct of examination for life assurance.[1] Dr. Brockbank is Honorary Consulting Physician of the Royal Infirmary, Manchester, and can speak with authority.

The book is divided into two parts. The first deals with the examination. After chapters on life assurance in general, proposal forms and reports, medical reports, the family history, personal history and routine medical examination, there are chapters devoted to the several systems. The author's advice is generally sound, and these chapters may be read with profit by all medical practitioners. We cannot, however, agree that the examiner need not require the proponent to strip to the waist, when his chest is being examined. Dr. Brockbank also states, in a chapter dealing with examination of women, that "the abdomen need not be exposed in a good life." This is appalling English. Does the author refer to the "white flower of a blameless life"? The female proponent will probably resent a too careful inquiry of this kind. If he refers to the health of the proponent, we think he is wrong—without a thorough examination it is impossible to arrive at a satisfactory conclusion. To teach that inadequate examination is permissible, is bad for all medical practitioners, but particularly for young graduates, who are more likely to read this book.

The second part of this book, on "Impaired Lives," is useful. As the author states in his preface, there is no common line of action for all companies, but this part of the book will be of considerable assistance in helping medical examiners to understand what is required of them.

On the whole, this book is likely to be useful and may be recommended, provided the medical examiner is prepared to be thorough in his examination. It is well printed, of a convenient size, and quite readable.

[1] "The Conduct of Life Assurance Examinations," by E. M. Brockbank, M.D. (Vict.), F.R.C.P.; 1931. London: H. K. Lewis. Demy 8vo., pp. 180. Price: 7s. 6d. net.

"AVERTIN."

SINCE the introduction of "Avertin" as a basal anæsthetic, medical practitioners in Australia have been awaiting the publication of an authoritative book on the subject. This want has been supplied by Dr. Kempson Maddox in "An Introduction to 'Avertin' Rectal Anæsthesia."[1] It may be stated at once that Dr. Maddox has produced a most useful book. His directions have been so carefully drawn up and are so complete that those who have not had experience of this powerful drug, may take his statements as their guide.

After an introductory chapter on rectal narcosis in general, the author considers the chemistry and pharmacology of "Avertin." This chapter should be carefully studied by all who wish to use the drug. Attention is directed specially to the section on the respiratory system, for "deaths from 'Avertin' poisoning are usually due to respiratory failure."

In the chapter on clinical considerations in rectal narcosis the author discusses first of all the advantages claimed for rectal narcosis and then enumerates the advantages peculiar to "Avertin." The first of these is convenience in handling, preparation and calculation of dosage. In the second place, when it is carefully prepared for injection and the obligatory tests are used, "Avertin" is definitely non-irritant to the intestinal mucosa. Thirdly, though the drug is highly potent, "a wide margin has been claimed to exist between the narcotic and lethal doses in animals." The author points out that this applies to man to a limited extent, and adds that in the hands of an experienced user there can be no doubt as to its safety. Further, "Avertin" is not excreted "in any degree" by the lungs; this is in contrast to the odour and taste of ether or paraldehyde that has been administered by the rectum. The author enumerates other advantages and states that the only disadvantage is the depressant effect on the respiratory centre. There are certain contraindications, absolute and relative, which need not be mentioned in this place.

The author gives a table for the calculation of the dose. The preparation of the patient is described, and then follow details of the preparation and testing of the solution and of its introduction. It is important to note that "from the time of administration of the solution up to the time of the return of the tone of the jaw muscles, a responsible person should be in close attendance." A section is devoted to the treatment of complications and sequelæ.

A chapter on "The Place of 'Avertin' in the Specialties" shows that "Avertin" will find a sphere of usefulness in midwifery, and general practitioners who buy this book will find the obstetric dosage table useful.

Not the least important is the last chapter, in which deaths from "Avertin" are discussed. In this chapter the author reiterates the statement that "Avertin" is a most potent drug, but dangerous only when misapplied.

From this short description may be gathered what manner of book Dr. Maddox has produced. He has shown that "Avertin" must be treated with the utmost respect, and we cannot fail to agree with him that "no one can treat disdainfully a discovery so carefully and thoroughly introduced." Professor Harold R. Dew, who has written a foreword, recommends the perusal of the book to all those interested in the subject of anæsthesia. We feel that those who study the book, will use it.

A word of praise must be added for the way in which the printers and publishers have done their work. The list of medical books written, printed and published in Australia is growing. This, the latest addition to the list, would be a credit to any part of the English-speaking world.

[1] "An Introduction to 'Avertin' Rectal Anæsthesia," by J. Kempson Maddox, M.D., Ch.M., M.R.C.P., with a foreword by H. R. Dew, M.B., F.R.C.S., F.R.A.C.S.; 1931. Australia: Angus and Robertson. Demy 8vo., pp. 132. Price: 9s. net.

The Medical Journal of Australia

SATURDAY, JANUARY 2, 1932.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: Initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction, are invited to seek the advice of the Editor.

RETROSPECT.

THE time has come once again to look back over another year, to note the progress made and to discover causes of failure so that they may be eliminated in the future. Progress in the life of the medical profession in Australia may be considered from two points of view: first, the scientific—the achievements of research, the results of clinical investigation and so on; the second is concerned with the corporate life of the profession and what are called in this journal its medico-political activities. There is surely no need to emphasize again that the scientific aspect is infinitely more important. Unless medical practitioners remember that they are first of all members of a scientific profession, their efforts will be sterile. The acquisition of wealth and even the leading of a comfortable existence must always be secondary considerations. However unsavoury this may be to some, it is nevertheless true. To review the additions that have been made to medical knowledge in the past twelve months would be a colossal task. It would be unwise to make the attempt. This is done each year in the well-known British "Medical Annual," a book that may be recommended with every confidence, and in the books of the "Practical Medicine Series" published in America. We should be lacking in our duty, however, were we not to point out that Australian investigators have not been idle and that work of importance has emanated from many centres in the Commonwealth, and it is the clear duty of every practitioner to report the occurrence of any pathological condition or combination of signs or symptoms from which useful deductions may be made or which appear likely to be of help to others in their search for truth. A road may be made of boulders, stones, pebbles and sand; these may be brought from places far apart by people unknown to one another, but when they are welded into a conglomerate whole, they make travel possible.

The corporate life of the medical profession finds expression in associations, societies, post-graduate committees and so forth. Some of the time of these bodies is occupied with medico-political matters; but a great deal is devoted to scientific study. In what follows the details of advance in medical knowledge are not considered.

The Medical Profession in Australia.

The growth of the medical profession in Australia has been about the same as that of the previous two or three years. The complaint is sometimes heard that its ranks are becoming overcrowded. This view cannot be justified while hospitals find it difficult to secure resident medical officers. A semblance of truth may be given to the statement by the unwillingness of many young graduates to leave the larger capital cities. Even with the present financial stringency, some of the hospitals in Western Australia are finding difficulty in securing the services of suitable young graduates. Admittedly many medical practitioners are finding it difficult to adjust their finances to the altered conditions. The remedy would not appear to lie in depleting the ranks of the profession, but in combating certain economic factors beyond the scope of the present discussion.

The British Medical Association.

The formation of a Federal Council has advanced a stage further. In the "Retrospect" of last year it was pointed out that some difficulty had arisen over one of the clauses of the proposed constitution.

At the meeting of the Federal Committee of the British Medical Association in Australia held in March, 1931, the difficulty was easily overcome, and it was resolved to submit the proposal to the Council of the Association on behalf of the Branches in Australia. Unfortunately, no meeting of the Federal Committee was held in September, 1931, and further developments cannot take place until the Federal Committee meets next February. It is not unlikely that the next meeting of the Federal Committee will be its last, and that the Federal Council will soon become *un fait accompli*.

The model rules governing procedure in ethical matters, having been finally approved by the Council of the Association, were submitted to the Branches in the several States and have been adopted by them.

The Branches have continued their activities, and if the accounts of meetings and annual reports published from time to time in these pages may be taken as a criterion, the keenness of members continues unabated. The Victorian Branch adopted the expedient of holding Branch meetings at regular intervals in country centres. These meetings are generally held at week-ends and are well attended, not only by practitioners from the district chosen, but by many who make the special journey from Melbourne. This is a practice that might be adopted with advantage by other Branches. It is true that one or two of the Branches have held meetings away from the metropolis, but they have been of rare occurrence. Not only will such meetings be exceedingly helpful to members in country centres, but they will remind city practitioners of the conditions under which those in the country work, and give them increased understanding and appreciation.

The British Medical Association in Australia has suffered a severe blow by the death of Dr. Robert Henry Todd. His achievements will be recorded later on, but here it may be stated that every Branch in the Commonwealth is in his debt, and will miss his readiness to give advice and help.

Australasian Medical Congress (British Medical Association).

The arrangements in connexion with the fourth session of the Australasian Medical Congress (British Medical Association) to be held in Perth in October, 1932, are progressing. The President (Dr. D. D. Paton), the Joint Honorary Secretaries (Dr. L. E. Le Soeuf and Dr. J. P. Ainsley) and the members of the Executive have been working continuously. We hope shortly to publish a list of office-bearers of sections. Signs are not wanting that the Congress will be carried to a successful issue.

The Universities.

The event of most importance during the past year in the University of Sydney has been the revision of the curriculum. It has been discussed in these columns. According to the latest reports it is working well. The University of Sydney is fortunate in that the Rockefeller Foundation has given the sum of £100,000 for the erection of a new block of buildings for a medical school in the grounds of the Royal Prince Alfred Hospital. Plans have been drawn and a start has been made with the building. There is no doubt that the close proximity of the medical school to the wards of the Royal Prince Alfred Hospital will facilitate teaching and make it more effective. Dr. C. B. Blackburn has been elected Dean of the Faculty of Medicine.

In the University of Melbourne considerable thought has been given to revision of the curriculum. The proposed changes have yet to be ratified by the University Council and the Committee of Convocation. Details will be published at a later date in these pages.

In the University of Adelaide effect has been given to regulations approved in 1930, providing for examinations at the end of the first, second, third, fifth and sixth years, and confining clinical examinations to the sixth year examination.

In the three universities uniformity has been reached in regard to the examination for the degree of master of surgery.

Post-Graduate Work.

In each of the six States there is a committee for post-graduate work. In some of them courses have been held during the past year. In at least one instance the idea of inviting lecturers from overseas was abandoned on account of the financial situation. This was a pity. Many people seem to be able to

find money for amusements in spite of financial depression. It is our conviction that medical practitioners will find money for post-graduate instruction and, if necessary, do some cheese-paring in another direction. It is to be hoped that in the coming year post-graduate committees will have more faith in the desire of the medical practitioners not only to revise the groundwork of medicine, but also to keep themselves informed of the latest developments in medical science. Medical practitioners will note with satisfaction that the Melbourne Permanent Committee for Post-Graduate Work has made arrangements for Mr. C. H. Fagge, Senior Surgeon of Guy's Hospital, London, to give some lectures on subjects of interest to general practitioners during his visit to Melbourne next February.

The introduction by the New South Wales Branch of the British Medical Association of weekly post-graduate demonstrations in out-patient departments of metropolitan hospitals, available to all medical practitioners, has been much appreciated and is the first step towards permanent and continuous post-graduate teaching.

The arrangements made by the Royal Australasian College of Surgeons and the College of Surgeons of England for the holding of the Primary Examination in Australia were carried out successfully. That ten candidates out of twenty passed is almost unprecedented in the history of the examination. We are fain to hope that the success of the first examination of this kind to be held in Australia will lead to its repetition; it would undoubtedly give scope and incentive for post-graduate study.

Hospitals.

As has been shown by a recent article in these columns, the question of hospital practice looms large on the horizon. The scheme which is attracting the attention of practitioners in all the States is that put forward by the Victorian Branch of the British Medical Association. As already pointed out, the ideas behind this scheme are essentially sound; and it makes provision for a large body of persons who stand most in need of it. This scheme is the first practical outcome of all the work on the subject by Dr. David Embelton. Although practitioners in other States have not the opportunity of falling in with this scheme, they will wish to see it succeed. They have the same problem to face and they have had to decide on their attitude in regard to proposals made from outside the ranks of the medical profession. It is a matter of congratulation that at length authorities are recognizing that people admitted to public hospitals, who are in a position to pay for medical attention, should pay. The admission of this principle is an important step forward. Recent developments seem to make it more clear than ever that the honorary system, as it was known in the last few decades, has served its purpose and will be superseded.

In Queensland the Royal Commission on Hospitals published its report a little over a year ago. So far legislation has not been introduced to give effect to the recommendations of the Commission. At the same time, several of the recommendations have been acted upon. The Commission recommended that the administration of the *Hospitals Acts* should be placed under the permanent control of a commission of three members. Action in this direction is urgently needed.

A Royal Commission was appointed to inquire into the working of the Hobart General Hospital. A report has been published and certain important suggestions have been made for the future management of the institution (see THE MEDICAL JOURNAL OF AUSTRALIA, December 12, 1931, page 762).

The Royal Australasian College of Surgeons.

The College of Surgeons of Australasia has changed its name. Assent has been given to the use of the word "Royal" and a coat of arms, full of symbolism, but of doubtful artistry, has been granted to the College. The College is to be congratulated on having received a benefaction of £40,000 from the estate of the late Robert Gordon Craig. The income from this bequest, in accordance with the wish of the testator, will be devoted to the furthering of research and the training of surgeons. The title of the journal of the College has been altered to *The Australian and New Zealand Journal of Surgery*; it is published every quarter instead of every four months.

The Association of Physicians of Australasia.

Early in 1930 "The Association of Physicians of Australasia (including New Zealand)" came into being. The main object of this association is the advancement of internal medicine. In the nature of its constitution it is not likely that much will be heard of its activities. No representatives of the Press, lay or medical, are present at its proceedings and no report is sent to medical journals or newspapers. Though this provision deprives the association of the benefit of outside criticism, it certainly eliminates from its councils the "limelighter" and the notoriety-seeker. It also throws an additional burden on the enthusiasm of the organizers. We fail to see how this new body can have other than a stimulating effect on its members and thus indirectly be helpful to the study of medicine in Australia and New Zealand.

"The Medical Journal of Australia."

No account of the work of the past twelve months would be complete without some reference to this journal. The Australasian Medical Publishing Company, Limited, which controls it, has, in spite of the financial stress of the times, been able to keep its head above water. That this journal has been of some use to the Branches is largely due to the help given by members of all the Branches. Particular mention might be made of the Editor's representatives in the several States: Dr. Joyce Stobo, in Queensland; Dr. A. P. Derham, in Victoria; Dr. Ivan B. Jose, in South Australia; Dr. J. P. Ainslie, in Western Australia and Dr. J. H. B. Walch, in Tasmania. The work of a representative is of the utmost importance to the Branches. If the representative should appear to be unduly importunate, it would be well for members to realize that the importunity is probably the result of their failure to respond to legitimate demands made upon them.

Conclusion.

From the foregoing it is clear that 1931 has been a year of activity. More might possibly have been done in certain directions, but if this is realized, the prospects for the future will be brighter. Members of the British Medical Association in Australia may look forward hopefully to the year 1932.

Current Comment.

FUR DERMATITIS.

DERMATITIS due to the wearing of dyed fur is now a well recognized clinical entity. In the early stages there is a blotchy erythema of the lateral aspects of the neck and face; later the whole of the neck and face becomes affected. Œdema becomes a pronounced feature, and there is considerable disfigurement; the tissues may become infiltrated, and there is often a tendency to vesiculation and "weeping." Itching and burning are more severe than would be expected from the appearance of the lesions. Semon remarks that seborrhœic dermatitis is the only dermatosis at all resembling fur dermatitis.

Though it was known that the furs responsible for the disease had been treated with paraphenylenediamine or metaphenylenediamine, it has never been made quite clear whether the fault lay with either of these substances or any of their oxidation products, or the result of their interaction with the fur itself or with the skin secretions; nor has an adequate reason been given for the susceptibility of certain persons and the apparent immunity of others. With the object of obtaining a more precise knowledge of the ætiology of fur dermatitis, G. H. Percival recently investigated the effects of the application of dyed fur and various chemical substances, under various conditions, to normal and unhealthy skins.[1] Undyed lamb's wool was applied to the skins of three persons who had previously suffered from fur dermatitis; though the substance was kept in contact with the skin for twenty-four hours, there was no ill effect. The application of lamb's wool that had been dyed with paraphenylenediamine and had previously caused dermatitis, resulted in a pronounced reaction in each instance. The test was also applied to sixty-five persons suffering from various skin disorders. There was no reaction; but when the test was repeated sixteen days later, one patient reacted. Percival suggests that this patient had been sensitized by the initial application. Experiments were made with solutions of four proprietary substances employed in the dyeing of a particular lamb's wool fur. One of these substances contained paraphenylenediamine. When applied in a solution of 0·5% to the skin of persons known to be liable to fur dermatitis, the paraphenylenediamine compound (for convenience Percival labels it "A") invariably caused a reaction; the other solutions had no apparent effect. Of fifty patients suffering from various skin diseases, only one reacted to the application of "A." A 10% solution of "A" applied to normal skins usually caused no ill effect, but in some instances a 5% solution caused a reaction. A solution of "A" was mixed with hydrogen peroxide for twenty-four hours and then applied to the skins of five susceptible persons; there was a mild reaction in two instances, and no reaction in the other three. Thus contact of a

[1] *The Lancet*, August 22, 1931.

susceptible person with substance "A" or its early oxidation products may cause dermatitis, while the later products of oxidation do not have such a pronounced ill effect.

It was found that if a dyed fur was adequately cleaned, it was far less likely to cause dermatitis. Presumably this is due to a reduction in the strength of the solution of "A" in the skin secretions; as the application of a 0·005% solution caused a reaction in two of seven cases in which tests were made, it is obvious that an exceedingly minute quantity of unfixed dye is all that is necessary to produce a lesion. Unsuccessful attempts were made to transfer sensitivity to normal skins by means of an intradermal injection of the blood serum of sensitized persons.

Percival concludes that substance "A" is the only substance concerned in the production of fur dermatitis, and that the idiosyncracy is due to allergy. This latter view can be taken only as an expression of opinion. Probably fur dermatitis is an allergic phenomenon; but there scarcely seems to be sufficient proof to warrant any definite assertion on the point. It was held originally that protein antigens were necessary for allergic sensitization; it is now known that other substances are sometimes responsible. Therefore, the chemical composition of the substance "A" is not incompatible with the possibility of its importance as an allergic antigen. Still, in this age, many otherwise unexplainable phenomena are attributed to allergy, more or less as a matter of form. Doubtless there are great numbers of conditions that should rightly be so explained; but it behoves the medical practitioner to hesitate before accepting any comfortable theories that are not built up from a sound basis of fact. It is interesting to note that as long ago as 1923 Roxburgh suggested that the idiosyncracy for the phenylenediamines might be due to sensitization; as a parallel, he quoted Cash's experiments of sensitization with East Indian satinwood.

Fur dermatitis is one of an increasingly large group of diseases caused by modern instruments, chemical substances, methods of manufacture *et cetera*. Doubtless there are in this group today pathological conditions of which no scientific knowledge exists. Percival's admirable piece of work is an example of the method of conducting an investigation into the nature of one of them.

STRANGULATED HERNIA.

CLAUDE FRANKAU has recently made a review of 1,487 cases of strangulated hernia.[1] This review, apart from its surgical interest, emphasizes the seriousness of the condition and the need for prompt recognition and treatment. The criteria of strangulation were the presence of some or all of the symptoms of absolute constipation, pain and vomiting and evidence at operation of some interference with the blood supply of the sac. In umbilical hernia it was sometimes difficult to exclude cases in which obstruction rather than strangulation was present. The mortality in each group was: inguinal, 12·6%; femoral, 12·9%; umbilical, 41·1%; all types, 15·7%. Resection of the intestine was necessary in 105 cases, and among these there were 45 deaths. Pulmonary embolism occurred in ten instances, with eight deaths, out of a total of 1,480 operations. Pulmonary complications, such as bronchitis, pneumonia and so forth, followed the operation in 105 instances, with 35 deaths. Stercoraceous vomiting was recorded in 60 cases; 40 of the patients recovered and 20 died. In the majority of patients who required resection, the symptoms had been present for 24 hours or more. It is significant that the use of local or spinal anæsthesia is recommended to obviate the high rate of pulmonary complications due to inspiration of infective material.

[1] *The British Journal of Surgery*, October, 1931.

INFECTIOUS DISEASES NOTIFICATION IN NEW SOUTH WALES.

DR. ROBERT DICK, Director-General of Public Health of New South Wales, announces that an alteration will shortly take place in the method of payment to medical practitioners for the notification of proclaimed infectious diseases. Hitherto, medical practitioners have been responsible for submitting claims in respect of cases notified by them. These claims have been submitted at irregular intervals, and have sometimes covered periods ranging up to several years.

From January 1, 1932, medical practitioners will not be required to submit these claims. After that date schedules showing the number of notifications by each medical practitioner will be prepared in the office of the Director-General Public Health at the end of each quarter, and payment will be made at quarterly intervals. This will relieve medical practitioners of obligation to submit claims, will insure regularity of payments and will facilitate accountancy procedure. It should, therefore, prove a benefit to all concerned.

AN INVITATION.

A LETTER has been received by the Acting Secretary of the Federal Committee of the British Medical Association in Australia from Dr. T. C. Routley, the General Secretary of the Canadian Medical Association (in affiliation with the British Medical Association), expressing the hope that some members proceeding to England to attend the centenary meeting of the Association will find it possible to travel *viâ* Canada and to attend the annual meeting of the Canadian Medical Association *en route*. The Canadian meeting will be held on June 20 to 24 and members will sail from Montreal for England on July 2. Dr. Routley invites Australians to join Canadian members in their pilgrimage to England.

Abstracts from Current Medical Literature.

PHYSIOLOGY.

Posture and the Circulating Blood Volume.

R. L. WATERFIELD (*Journal of Physiology*, June, 1931) has determined the blood volume of human subjects in the erect and recumbent posture by means of the carbon monoxide method. The volume is less when the subject is standing than when lying down. The loss in blood volume mainly concerns the plasma, which shows an average diminution of 15%. There is an accompanying loss of cell volume, averaging 4% of total cell volume. In the erect posture there is an increase in the plasma protein concentration, such as would be expected if the globulin fraction alone did not diffuse through the capillary walls. Observers using the dye method find a smaller diminution in the volume of the plasma, no change in the cell volume, and changes in the plasma protein concentration which suggest that both albumin and globulin fractions are retained by the capillary endothelium. These differences between the results obtained by the gas and dye methods can be explained by the diffusion of the dye into the lymphatic spaces.

The Van den Bergh Reaction.

NORMAN W. ELTON (*The Journal of Laboratory and Clinical Medicine*, October, 1931) has studied the Van den Bergh reaction, the icterus index and quantitative serum bilirubin estimation. Mann has shown that nascent bilirubin is produced extrahepatically in the dog at a very rapid rate. The production rate in the human organism may be estimated as equally rapid. Mann found that such nascent bilirubin is "direct negative" in terms of the Van den Bergh reaction. It has long been known that negative bilirubin is changed to the direct positive form by the liver parenchyma in mammals as it is excreted. The difference in these two forms of bilirubin has been found to depend on the physical state of the pigment, the direct negative form being free nascent bilirubin occurring as a suspensoid colloid, the direct positive form being an unstable crystalloid salt of bilirubin. Since the liver parenchyma is ordinarily impermeable to substances in the colloidal state, the conversion of free bilirubin to a crystalloid salt is a necessary part of the excretion process. The excretion of the pigment by the liver must be efficiently maintained to preserve the balance and to prevent a constantly ascending icterus. It is likely that the Küpffer cells in mammals act as the acceptors of nascent colloidal bilirubin, their relative permeability to the pigment being the threshold determinant under normal conditions and in functional icterus. The direct delayed Van den Bergh reaction can be interpreted as indicating intermediate stages in the transition of nascent bilirubin to the crystalloid form, arising from pigmentary congestion in the liver parenchyma, the speed of the reaction depending on the relative solubility of the conversion products. Minute quantities of fully converted crystalloid bilirubin give rise to direct positive reactions in serum, and when both forms exist together, the reaction is direct positive. The icterus index may be better understood as a "yellow intensity" index and not directly proportional to the bilirubin content, because of the many possible differences in the physical state and solubility of the pigment present. The author found by correlating the results of the examination of over 1,700 specimens of serum by the three test methods that: (i) The icterus index fails to conform consistently with any constant proportion of total bilirubin. (ii) For a given icterus index the bilirubin content of the serum is higher when the bilirubin is in the colloidal state than when it is crystalloidal. (iii) Colloidal bilirubin accumulates in the blood stream at the icterus index, 16·6, but fails to impart a higher colour intensity to the serum in which it is suspended until it undergoes a physical change, expressed by the development of an intermediate type Van den Bergh reaction.

Oxygen Consumption and Menstruation.

C. L. WIBLE (*The Journal of Laboratory and Clinical Medicine*, October, 1931) refers to conflicting reports regarding the intensity of oxidation processes in women during menstruation. He has determined the oxygen consumption of 22 women, covering a total of 118 menstrual cycles; each cycle involved five tests. With one exception there was a low oxygen consumption during menstruation. About one-half of the subjects had one or two menstrual periods in which oxygen consumption during menstruation had a tendency to rise above the premenstrual consumption. The period of highest oxygen consumption seems to be two weeks after cessation of menstruation.

The Pyloric Sphincter and Acid in the Stomach and in the Duodenum.

C. J. MOGAN AND J. E. THOMAS (*American Journal of Physiology*, June, 1931) have investigated the tonus and contractions of the pyloric sphincter of unanæsthetized dogs in which there was no evidence of digestive or nutritional disturbance as a result of the necessary preliminary operative procedures. One-tenth normal hydrochloric acid solution was used as the stimulus and was delivered as near as possible to the pyloric sphincter on either the gastric or the duodenal side. Acid in the duodenum commonly caused a brief increase in the tonus of the sphincter accompanied by a series of rapid contractions, followed by a prolonged cessation or decrease in extent of contractions and frequently a decrease in tonus. Increase in the amount of acid prolonged proportionately the period of inhibition. The predominant effect of acid in the duodenum appeared to the authors to be a decrease in the extent and constancy of the contractions. The sensitivity to acid was markedly decreased by taking food and by the previous administration of acid. Injecting acid into the stomach in amounts ranging from four to forty cubic centimetres was either without result, or else caused a moderate increase in the tonus of the sphincter. The authors regard the inhibitory effect of acid in the duodenum as probably incidental to a general inhibition of the stomach.

The Concentration of Hæmoglobin in Normal Human Blood.

C. PRICE-JONES (*The Journal of Pathology and Bacteriology*, November, 1931) states that it is customary in England to say that the blood of a healthy man has 100% hæmoglobin, corresponding to an oxygen capacity of 18·5 cubic centimetres per 100 cubic centimetres of blood, and that a woman has 90% hæmoglobin or 16·6 cubic centimetres of oxygen *per centum*. He has estimated the hæmoglobin of 100 healthy men and 100 healthy women in London and of 20 healthy men in Boston, America. He finds that the mean concentration of hæmoglobin in the London men is represented by 105% on the scale of the Haldane hæmoglobinometer, and in women by 98%. In the Boston men the concentration was 112%. The Van Slyke method gave slightly higher results. He suggests that chronic monoxide poisoning from petrol engines is partly responsible for high levels of hæmoglobin found at the present time.

BIOLOGICAL CHEMISTRY.

The Lactic Acid Content of Blood.

N. J. EASTMAN AND C. M. MCLANE (*Bulletin of the Johns Hopkins Hospital*, May, 1931) have reported a study of the lactic acid content of maternal and umbilical blood in twenty-four cases. Seven cases of definite fœtal asphyxia were included, and three of the babies died. The lactic acid determinations were made by the method of Friedemann and Kendall, care being taken to prepare the blood filtrates immediately after the blood was obtained. The authors find that the lactic acid in the blood of the fœtus *in utero* is within normal limits, and the fact that the arterial and venous blood of the fœtus *in utero* shows no detectable differences in lactic acid

content, indicates that normally little of this acid is produced in the fœtal tissues. The lactic acid in the blood of infants at birth is found to be regularly elevated, with an average value of 35 milligrammes per hundred cubic centimetres. The values for the blood from the umbilical vein and the blood from the umbilical artery are similar. In normal infants the lactic acid content at birth is increased owing to simple diffusion from the mother, whose blood lactic acid at the moment of delivery is increased as the result of the muscular exercise incident to labour. There is a constant relationship between the lactic acid content of the blood of the umbilical vein and artery and the blood of the maternal vein. In asphyxiated infants this relationship no longer holds, as there is a definite endogenous production of lactic acid, the blood lactic acid levels in these infants rising above that of the maternal blood to reach concentrations as high as 90 milligrammes per hundred cubic centimetres. The high concentration of the lactic acid exhibited by these asphyxiated infants suggests the *asphyxia neonatorum* is associated with considerable acidosis, but the authors hesitate to draw conclusions as to its importance at the present stage of their investigations.

Tetany and Diet in Rats.

A. F. HESS, M. WEINSTOCK, H. R. BENJAMIN AND J. GROSS (*Journal of Biological Chemistry*, March, 1931) attempted to induce tetany in rhachitic animals by means of a ration which approximated as nearly as possible to the normal dietary of an infant. Young rats were rendered rhachitic by a ration high in calcium and low in phosphorus. It was found that tetany could be induced in these rats simply by an abrupt change from this ration to a normal ration of dried milk or of dried milk and whole wheat. In order to make the dietary resemble that of infants more closely, one gramme of carrots was added to the ration in some instances. In all cases there was a pronounced fall in the calcium content of the serum and an associated rise of the phosphate in the blood. This result developed within forty-eight hours, but was maintained for only a few days. This striking reaction was found not to be due to an absolute nor to a relative increase of phosphorus in the dietary, but to a sudden shift in the calcium:phosphorus ratio in the subsequent diet as compared with the preliminary diet. When this ratio is decreased from about 4:1 to 1:1 or 1·5:1, tetany ensued, but if the ratio was decreased only to about 2:1, the fall in calcium and the nervous symptoms did not occur. The sudden change of ratio associated with the healing of the rickets so disturbed the calcium-phosphorus balance in the body that the calcium concentration in the blood could not be maintained at its physiological level and hyperirritability of the nervous system followed. This phenomenon occurred although the preliminary diet was alkaline and the subsequent diet almost neutral. The authors conclude that these results may indicate that a dietary, in spite of being adequate and well balanced, can bring about an abnormal nutritional state owing to the fact that it does not harmonize with the previous diet of the animal. This, in their opinion, raises the question of whether it is sufficient to consider adequacy in regard to diets or whether the effect of abrupt changes in the diet must not also be taken into account. If this point of view is remembered, they think that it may explain some of the puzzling instances, especially in young children, characterized by intolerance to food which according to present knowledge should be well borne.

Blood Phosphorus and Calcium of Children.

MILAN SOKOLOVITCH (*Archives of Disease in Childhood*, June, 1931) has published the results of investigations on the distribution of phosphorus in the blood of the child, and especially on the quantitative changes resulting from disease. He has shown that the blood of normal children is relatively richer in all the phosphorus compounds than that of adults, and that these compounds show a slightly greater variation in distribution in children than in adults. The red corpuscles were found to be richer in free phosphorus than the plasma. Kay and Byrom applied the term phosphoric index of the blood to the amount of the ester phosphorus *per centum* of the red corpuscles, and found the index very constant in the normal adult. This index showed a tendency to be higher and less constant in children than in adults, and the difference suggests that the red blood corpuscles of children are richer in the ester phosphorus compounds than those of adults. The lipin phosphorus of the red blood corpuscles was almost as constant an ingredient as the ester phosphorus. The calcium content of the blood was estimated by the method of Kramer and Tisdall, and the average was found to be 10·73 milligrammes *per centum*. There was no evident relationship in distribution between the serum calcium and any phosphorus compound in either whole blood, blood plasma or corpuscles. The author deals with various diseases. Ten cases of nephritis were investigated. In all these cases the free or inorganic phosphorus tended to rise above the normal level during the disease and to return to the normal level on recovery. The only exception was a child suffering with acute nephritis with definite symptoms of uræmia; in this instance the inorganic phosphorus did not rise above the normal level. Usually, but not invariably, the rise in the free phosphorus and inorganic phosphorus occurred simultaneously. The findings did not support the contention of de Wesselow that the inorganic phosphate retention is more definitely connected with the symptoms of uræmia than the non-protein nitrogen. In two cases of this series there were marked uræmic symptoms before there was any rise in the free phosphorus of the blood. The proportionate relationship between the free phosphorus of plasma and the red blood corpuscles was often disturbed during the disease. The ester phosphorus content of the whole blood showed a tendency to decrease, while the ester phosphorus of blood plasma was often found greatly increased during the course of the disease. The ester phosphorus of the red blood corpuscles or the so-called phosphoric index showed much greater variation than normally and was very high in the early stages of the disease. The lipin phosphorus compounds of the blood, red blood corpuscles and plasma showed marked variations during the disease, and the results gave evidence of a relationship between the lipin and ester phosphorus compounds of the red blood corpuscles, as both of them showed a tendency to rise or fall at the same time. The calcium content of the blood serum showed a tendency to be reduced, and the results gave some evidence in support of a relationship existing between the lipin phosphorus content and the calcium content of the serum in nephritis. In *diabetes mellitus* the free phosphorus of the whole blood was found to be reduced and the free phosphorus of the blood plasma, although appreciably less than normal, was greater than the free phosphorus of the whole blood; this is the reverse of the normal relationship existing between the free phosphorus of the whole blood and blood plasma. The reduction of the free phosphorus in the red blood corpuscles was very marked. The free phosphorus in both corpuscles and plasma tended to rise with treatment of the diabetic condition. The ester phosphorus content of the red corpuscles was also reduced in amount, and the average ester phosphorus of whole blood was slightly below the normal. The lipin phosphorus of the whole blood was found to be reduced, and the fall was entirely at the expense of the cellular portion of the whole blood. This also tended to rise to normal during treatment. The total phosphorus content of the blood was also reduced. The calcium content of the serum of diabetic children was found to be within the limits of normality. The author also reports findings in infantile tetany and idiopathic convulsions. He concludes that in disease changes occur in the partition of the phosphorus compounds of the blood. These changes vary in different diseases; the most pronounced and most frequent changes occur in the free and lipin phosphorus fractions. In no diseases was there noted any accumulation in the phosphorus content of the blood, but merely a redistribution of the different phosphorus compounds.

British Medical Association News.

ANNUAL MEETING.

THE ANNUAL MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION AND OF THE MEDICAL SOCIETY OF VICTORIA was held in the Medical Society Hall, East Melbourne, on December 2, 1931, DR. VICTOR HURLEY, the President, in the chair.

ELECTION OF OFFICE-BEARERS AND MEMBERS OF COUNCIL.

President: Dr. B. M. Sutherland.

Senior Vice-President: Dr. W. G. D. Upjohn.

Junior Vice-President: Dr. Gerald Weigall.

Chairman of Council: Dr. J. Newman Morris.

Honorary Secretary: Dr. J. P. Major.

Honorary Treasurer: Dr. C. H. Mollison.

Honorary Librarian: Dr. W. G. D. Upjohn.

The President announced that the following had been elected members of the Council by the general body of members: Professor R. Marshall Allan, Dr. H. C. Colville, Dr. John Dale, Dr. A. P. Derham, Dr. R. M. Downes, Dr. D. M. Embelton, Dr. W. A. Hailes, Dr. Victor Hurley, Dr. L. S. Latham, Dr. J. P. Major, Dr. D. Rosenberg, Dr. H. D. Stephens, Dr. B. M. Sutherland, Dr. B. T. Zwar.

The President also announced that the following had been elected by the Subdivisions: Dr. J. R. Bell, Dr. F. J. Bonnin, Dr. W. F. Brownell, Dr. J. A. Cahill, Dr. S. C. Fitzpatrick, Dr. J. W. Florance, Dr. W. H. Godby, Dr. G. H. Guthridge, Dr. P. V. Langmore, Dr. F. E. McAree, Dr. R. G. McPhee, Dr. D. C. Pigdon, Dr. W. A. Spring, Dr. Walter Summons, Dr. A. R. Thorne, Dr. W. G. D. Upjohn, Dr. Gerald Weigall, Dr. J. F. Wilkinson.

The President also announced that Dr. R. H. Fetherston, Dr. Frank L. Davies, Dr. C. H. Mollison and Dr. J. Newman Morris were the *ex officio* members of the Council.

The representative of the Victorian Medical Women's Association was Dr. Constance Ellis.

ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council, having been circulated, was taken as read and adopted.

The Council of the Branch and the Committee of the Society present the fifty-second annual report of the Branch and the seventy-sixth of the Society.

Election.

At the annual meeting, held last December, the following members of the Council and of the Committee were elected: Dr. A. V. M. Anderson, Dr. H. C. Colville, Dr. John Dale, Dr. A. P. Derham, Dr. D. M. Embelton, Dr. Allan Hailes, Dr. Victor Hurley, Dr. W. W. S. Johnston, Dr. L. S. Latham, Dr. J. P. Major, Dr. D. Rosenberg, Dr. H. Douglas Stephens, Dr. B. Milne Sutherland and Dr. B. T. Zwar.

The following were elected to represent the Subdivisions: Dr. J. R. Bell, Dr. F. J. Bonnin, Dr. W. F. Brownell, Dr. J. A. Cahill, Dr. S. C. Fitzpatrick, Dr. J. W. Florance, Dr. W. H. Godby, Dr. G. H. Guthridge, Dr. G. J. Ley, Dr. F. E. McAree, Dr. R. G. McPhee, Dr. D. C. Pigdon, Dr. W. A. Spring, Dr. Walter Summons, Dr. A. R. Thorne, Dr. W. G. D. Upjohn, Dr. Gerald Weigall and Dr. J. F. Wilkinson.

The Council, by virtue of its powers under Rule 8, coopted Professor R. Marshall Allan, Dr. R. M. Downes and Dr. Allen Robertson, and by the same rule elected Dr. Constance Ellis, nominated by the Victorian Medical Women's Society. The four trustees of the Medical Society of Victoria are members *ex officio*.

The Council elected the following office-bearers: President, Mr. Victor Hurley; Vice-Presidents, Dr. B. Milne Sutherland and Dr. W. G. D. Upjohn; Honorary Secretary, Dr. J. P. Major; Honorary Treasurer, Dr. C. H. Mollison; Honorary Librarian, Dr. W. G. D. Upjohn; and Chairman of Council, Dr. J. Newman Morris.

Council Meetings.

There were fourteen ordinary and four special meetings of the Council, at which the attendances were as follow:

Davies	18	Summons	13
Major	18	Weigall	13
Sutherland	18	Zwar	13
Cahill	17	Allan[1]	12
Downes	17	Anderson[2]	12
Embelton	17	Bell	12
Hurley[1]	17	Mollison	12
Morris	17	McAree	12
Wilkinson	17	Dale	11
Ellis	16	Hailes	11
Guthridge	16	Latham	10
McPhee	16	Thorne	8
Robertson	15	Brownell[2]	6
Stephens	15	Fetherston	6
Upjohn[1]	15	Bonnin	0
Rosenberg	14	Fitzpatrick	0
Colville	13	Florance	0
Derham[1]	13	Godby	0
Johnston[2]	13	Ley	0
Pigdon	13	Spring	0

[1] Absent from State.
[2] Absent through illness.

The average attendance at each meeting of the Council was 25·8. The highest number present at any meeting was 31 and the lowest 18.

Council Subcommittees.

The following subcommittees were appointed by the Council. The first-named member acted as convener of the subcommittee.

Executive: The President, with the other office-bearers and Immediate Past-President, Dr. R. G. McPhee.

Ethics: Dr. Wilkinson, Dr. Anderson, Dr. Davies, Dr. Downes, Dr. Latham, Dr. Pigdon, Dr. Weigall, together with the office-bearers.

Finance, House and Library: Dr. Mollison, Dr. Fetherston and Dr. Upjohn.

Legislative: Dr. Colville, Dr. Marshall Allan, Dr. Davies, Dr. Guthridge, Dr. Latham, Dr. Morris, Dr. Zwar.

Organization: Dr. Robertson, Dr. Rosenberg, Dr. Sutherland, together with the representatives of the Subdivisions.

Public Health: Dr. Stephens, Dr. Marshall Allan, Dr. Cahill, Dr. Dale, Dr. Derham, Dr. Ellis and Dr. Summons.

Public Questions: Dr. Bell, Dr. Brownell, Dr. Dale, Dr. Embelton, Dr. Fetherston, Dr. Rosenberg and Dr. Summons.

Services: Dr. Downes, Dr. Dale, Dr. Derham, Dr. Fetherston, Dr. Hailes, Dr. Johnston, Dr. McAree and Dr. Robertson.

Science: Dr. Hailes, Dr. Bell, Dr. Colville, Dr. Downes, Dr. Ellis, Dr. Johnston and Dr. Stephens.

Hospital: Dr. Davies and Dr. Thorne, together with the Advisory Committee to the Charities Board.

Standing Insurance: Dr. Embelton, Dr. Davies, Dr. Hurley, Dr. Mollison and Dr. McPhee.

Correspondence: Dr. Major and Dr. Morris.

Special Subcommittees.

Early Medical History: Dr. Felix Meyer, Dr. A. Black, Dr. W. R. Boyd, Dr. R. H. Fetherston, Dr. J. W. Dunbar Hooper, Dr. G. T. Howard, Dr. A. L. Kenny and Dr. A. Jeffreys Wood.

Wonthaggi: Dr. Sutherland, Dr. Davies, Dr. Embelton, Dr. Major, Dr. Morris, Dr. Robertson, Dr. Wilkinson and Dr. Zwar.

Yallourn: Dr. Wilkinson, Dr. Davies, Dr. Major, Dr. Morris, Dr. Robertson and Dr. Zwar.

Appointments and Nominations.

Annual Representative Meeting, Eastbourne: Dr. J. B. D. Galbraith, representative and delegate; and Dr. Garnet Leary, delegate.

Federal Committee, 1932: Dr. Davies and Dr. Morris.

Bush Nursing Association: Dr. Derham and Dr. Sutherland.
Free Kindergarten Union: Dr. W. Kent Hughes.
Executive Committee, Victorian Baby Health Centres' Association: Dr. Derham.
Melbourne University Association: Dr. Stephens.
Health Association of Australia: Dr. Dale, Dr. C. H. Kellaway and Dr. Summons.
Victorian Institute of Almoners: Dr. Morris.
Lord Mayor's Fund: Dr. Morris.
Medical Advisory Committee, Education Department: Dr. Zwar.
Victorian Council for Mental Hygiene: Dr. Dale and Dr. Derham.
Melbourne Permanent Post-Graduate Committee: Dr. Anderson, and Dr. Johnston and the Convener of the Science Subcommittee (Dr. Hailes).
Big Brother Movement: Dr. Weigall.
The Society for Health of Women and Children of Victoria: Dr. Embelton.
Poliomyelitis Conference, Canberra: Dr. Jean Macnamara.

Standing Appointments.

Trustees of the Medical Society of Victoria: Dr. Davies, Dr. Fetherston, Dr. Mollison and Dr. Morris.
The Advisory Committee to the Charities Board: Dr. Hurley, Dr. Latham, Dr. Anderson, Dr. Morris, Dr. McPhee, Dr. Wilkinson and Dr. Zwar.
Central Council, British Medical Association: Dr. T. P. Dunhill.
Victorian Correspondent, "The British Medical Journal": Dr. Derham was recommended to the Editor of *The British Medical Journal* for appointment in place of Dr. Leslie Hurley, resigned; he was duly appointed.
British Medical Agency Company of Victoria Proprietary, Limited: Managing Director, Mr. W. Ramsay; Directors, Dr. Mollison and Dr. Fetherston.
British Medical Insurance Company of Victoria: Secretary, Mr. H. M. Brindley; Directors, Dr. Mollison, Dr. Fetherston, Dr. Hughes and Dr. Morris.
Board of Australian Inland Missions: Dr. J. W. Dunbar Hooper.

Membership Roll.

The number of members on the roll is 1,345. Fifty-six names were added (25 by election, 10 who had paid arrears, and 21 by transfer from other States). Ninety-three were removed (16 by death, 19 by resignation, 36 by transfer to other States, and 21 who allowed their subscriptions to fall two years in arrears).

We have to record, with regret, the death of the following members and associates: Dr. Chas. Bage, Dr. C. G. Crowley, Dr. Carl P. Dyring, Dr. Mavis Engelbrecht, Dr. M. F. H. Gamble, Dr. David Grant, Dr. E. I. Lowther Graves, Dr. John A. Lynch, Dr. Val Macdonald, Dr. A. W. Marwood, Dr. C. H. Molloy, Dr. A. E. Morris, Dr. P. A. Parer, Dr. C. R. Player, Dr. S. Docker Read, Dr. Thos. O'L. Reynolds, Dr. J. L. Ross-Soden.

Associates.

The following members were transferred to the list of associates: Dr. B. Stewart Cowen, Dr. H. Osburn Cowen, Sir George Cuscaden, Dr. Ulick A. Daly, Dr. T. Taylor Downie, Dr. E. H. Fyffe, Dr. J. A. Harbison, Dr. G. J. Hodgson, Dr. J. S. Mackay, Dr. H. St. J. Mitchell, Dr. C. R. Player, Dr. D. E. Stewart.

The number of associates is now 32.

Council Procedure.

A new method of transacting the business of the Council was introduced early in the year. This has entailed additional work by the Executive. The Council, having thereby been relieved of much detail, has been able to reduce the number of its meetings and to devote more time to matters of importance.

Ethics Subcommittee.

There were ten meetings of the Committee, with an average attendance of nine.

Among many matters dealt with, it is thought that the following should be brought under the notice of our members:

A number of notices appeared in newspapers with regard to the attendance of medical practitioners upon patients. In the majority of cases these were reported to the Council by the members themselves, and in one case we had the assurance of the editors of two newspapers that it was a strict rule in their offices that doctors' names should not be mentioned, and an apology was offered for the unfortunate breaking of that rule.

Attention was drawn to the publication, in a directory, of degrees of some medical practitioners, and they were asked to make the notices conform with those of the other professional names in the directory.

The practice of newspapers publishing interviews with medical practitioners returning from abroad has been increasing, and reference has frequently been made to their medical attainments. It was pointed out to the editors that the interests of the members concerned were liable to be injured by such publication, as it was looked upon by their fellow practitioners as indirect advertising.

The question of the status of a number of medical practitioners was considered, and two practitioners who had been ineligible for membership were admitted after giving satisfactory assurances.

Our solicitors advised that the surgeon was not responsible for the anæsthetist's fee. This opinion was confirmed by the solicitor of the British Medical Association in England.

The Council recognizes that conditions in country towns may be of such a nature that the rigid enforcement of the principle with regard to the right of a consultant to attend a patient in an illness subsequent to the one seen in consultation, may be detrimental to the interests of both patient and consulting practitioner; and that in such cases the Council will be guided by the principle laid down in the "Lectures on Medical Ethics," by Dr. A. V. M. Anderson, that such patients should not be attended by the consultant for any illness for a period of, say, two years from the time of consultation of the former illness.

A member of the Association can see the patient of a practitioner ineligible for membership and give his opinion to the patient; he need not insist that the attending practitioner be first dismissed.

An insurance medical officer has the right to examine by X rays the patient of another practitioner, but, if possible, the attending practitioner should be notified of the intention so to do.

Organization Subcommittee.

The subcommittee directs the attention of the medical officers to friendly society lodges to the fact that certain conditions of the existing lodge agreement are not being carried out and that the terms of the agreement should be strictly adhered to. The grand secretaries of orders have been requested to instruct the lodge secretaries as to the correct terms of the agreement. Frequent reports have been received that lists of names are not provided at the beginning of each quarter, and that names are omitted from lodge lists. If persons, whose names are so omitted, receive medical attention, private fees should be charged.

There are many cases in which the medical officer is only being paid 12s. for female members, instead of the full rate, where male and female persons are in the same lodge.

Requests that female members in male lodges should be received at the 16s. rate have not been acceded to. In future, all agreements are to be marked "female lodges" in an effort to obviate further mistakes.

It will be obvious to our members that it is imperative on their part to see that the terms of the agreement are being complied with, for the loss to them represents a considerable sum.

We would again warn members not to enter into any negotiations whatsoever with local secretaries of lodges.

Any proposals emanating therefrom should be reported to our office, which will handle all such matters.

General secretaries of friendly societies have been informed in answer to their inquiries that no provision for special services is provided for in the lodge agreement, but that charges for such services are usually paid for by their members. It is advisable that medical officers should make special arrangements for payment for these services before rendering them.

The new uniform lodge agreement has been completed and approved by the Subdivisions, but the Council does not consider the time opportune for further action at present.

The question of a reduction in the fees payable to *locum tenentes* came under review and the medical agents were advised that such fees should be not less than £7 7s. per week.

The fees for certificates in connexion with cremation were fixed at from £1 1s. to £2 2s.

A scale of fees in connexion with radiological work was submitted to and approved by the Branch. It has been issued to all members.

The Government Medical Officers of the State Education Department and of the Postal Department have agreed to refer school children and employees respectively to their usual medical attendant when occasion arises for medical attention. In cases where there is no regular medical attendant, the patients who are unable to pay for private treatment, will be referred to public hospitals.

Doctors Practising in Mallee Areas.—Following on requests for advice and assistance received by the Council from some members practising in Mallee districts, the Council entered into negotiation with the State Government and waited on the Minister of Lands to state the case for our members.

At the request of the Government, Parliament agreed that medical expenses incurred by settlers under the Closer Settlement Board and for the Cultivation Advances Board should be regarded as having a preferential status. Our members were thus guaranteed that 50% of their charges should be met from harvest proceeds during 1931 up to a maximum of £10. Should an account for medical services during 1931 be for an amount over £20, and should the practitioner consider there are special circumstances which would justify him in claiming a preferential payment of more than £10, he should send with the account a detailed statement of the services and the reasons which seemed to him to justify the claim. A duplicate copy of such account and the statement should be sent to this office and, should the circumstances seem to the Council to justify the claim, efforts will be made to obtain the increased payment.

In view of the special circumstances obtaining in the Mallee, permission was given to two members to make private contracts with the townspeople. The details of these contracts were submitted to the Organization Committee and were approved. The period was limited to twelve months, at the end of which period the contract is to be reviewed.

Yallourn.—Consideration has been given to the reduction of salaries of the medical officers at Yallourn.

Children's Welfare Department.—Certain anomalies affecting the conditions of service of medical officers of the Children's Welfare Department have been investigated by the Council.

It was reported by a member that parents requiring State assistance for their children on the ground of ill-health were referred to medical practitioners for examination and certificate on a form supplied by the Children's Welfare Department, but the Department did not accept any responsibility for payment for this examination or certificate.

The Council was of opinion that this certification was a State service and should be paid for by the State, and members were advised not to furnish these certificates without payment.

It was reported also that it was the policy of the Children's Welfare Department to increase the accommodation in certain institutions, known as homes, under Part viii of the *Neglected Children's Act*. As the medical service to certain of these homes was honorary, the admission of wards of State involved an imposition on the medical officers concerned. This anomaly has been brought under the notice of the Chief Secretary, with the request that it be remedied.

During the year a reduction of 25% has been made in the remuneration of medical officers in the Children's Welfare Department. The Council approached the Chief Secretary and pointed out that this reduction was based on gross salary, which included the provision of medicine, for which some medical officers paid chemists one-third of their salary, making the real percentage reduction much greater than 25%.

The Council requested that the reduction be altered to make 20% on the real salary of the medical officers, and also that certain reforms in the condition of their services be approved, which did not involve increased expense, but which would increase the efficiency of their work.

These reforms had formed the basis of a deputation to the Chief Secretary early in 1930, and, among other things, included the request that medical officers should be required to inspect foster homes only once yearly, the children to be brought to their surgeries at regular intervals by the foster parents. It was again requested that these suggestions should receive the favourable consideration of the Minister.

Legislative Subcommittee.

This subcommittee met on five occasions. At the request of a member of the Branch who held the position of medical officer at Nauru, the position there was considered and representations made to the Federal Committee.

The Medical Act Amendment Bill came before Parliament. It was proposed to increase the penal powers of the Medical Board, pay the members of the Board, and to require an annual fee from each legally qualified medical practitioner in addition to the present registration fee. Both Houses of Parliament were circularized in the following terms:

(*a*) The Council suggests that one-third of the members of the Board should be nominated by "some association or body of medical practitioners which represents the majority of medical practitioners practising in Victoria" (as in No. 7, Regulations relating to Community Hospitals, *Hospital and Charities Act*, 1922—No. 3260).

(*b*) The Council points out that in all other boards with which it is acquainted, where an annual registration fee is required, the fee paid does not go into the consolidated revenue, but is placed at the disposal of the Board, and it should be so in this instance.

(*c*) If the chief purpose of the Bill is, as is pointed out, to protect the public from undesirable medical practitioners, the Board should be given additional powers with regard to unqualified and unregisterable practitioners, who are a still greater menace to the public, on similar lines to those powers existing in other States, *e.g.*, Queensland.

(*d*) Provision should be made for reciprocal arrangement by means of which deregistration by similar boards in other States and countries should be promptly notified to the Medical Board of Victoria.

(*e*) Failing these provisions being agreed to, the Council strenuously opposes an annual registration fee as proposed, seeing that it would be a special tax on a section of the community.

It was also proposed to reintroduce the Ministry of Health Bill. Accordingly, our former circular setting forth the views of the Council was also forwarded to the members of both Houses of Parliament.

The subcommittee also had under consideration an amendment of the rules to provide for an annual representative meeting of the Branch on similar lines to that of the Home Association. The Council of the Association in London suggested as an alternative the formation of a number of divisions, but this Branch Council made further suggestions that, in its opinion, local conditions

made the plan of a representative meeting preferable to that proposed by the Home Association. The matter is still under consideration.

Hospital Subcommittee.

This committee met seven times. The Council wrote to the Charities Board asking it to enforce the regulation concerning community hospitals, more particularly Clause 8 of Regulation 7: that the committee of the hospital concerned should appoint a subcommittee from its members to manage the part of the hospital set apart for paying or intermediate patients and should give to such part a distinctive name; the Charities Board intimated that this regulation applied only to hospitals in the metropolitan area and within a twenty-mile radius; that in the country hospitals, such as at Geelong and Ballarat, the committee as such could administer the intermediate wards. The accommodation set apart and the distinctive names specified in the regulations were only temporary and were designated "intermediate."

At the request of the Council the instructions to be read by patients applying for admission to public hospitals was amended to make it clear that the services of the honorary medical officers were being given free.

A hospital situated in a district where there are qualified medical practitioners carrying on privately the practice of radiology, should not provide for any patient able to pay private fees for radiological service, except such as in the best interests of the patient could only be obtained in that institution.

The Council, on a request for advice by the Geelong Hospital, expressed its opinion that an expert radiologist should be appointed to the Geelong Hospital with an honorarium, but that the hospital plant should not be available for cases not accommodated in the hospital.

The draft regulations governing intermediate patients at the Geelong Hospital, which were submitted to the Council, were approved. Provision is made therein for the transfer of patients from the general hospital to the intermediate ward.

The Charities Board informed the Council that it holds the opinion that patients able to pay and admitted to the infectious diseases wards in country public hospitals are liable for payment to their medical attendant, provided that he is not a medical officer on the paid staff.

The Council recommended the Federal Committee to take into consideration the desirability of requesting the Commonwealth Government to make an annual grant towards the curative treatment of patients suffering from the effects of poliomyelitis.

It was resolved that the value of the serum of old cases of anterior poliomyelitis should be examined as soon as possible with regard to its efficiency in combating the disease in its preparalytic stage, and that a similar investigation should be carried out with pooled normal human adult serum. Steps were taken to institute an after-care committee for poliomyelitis cripples. Information from various sources was collated and forwarded to the Charities Board, the Rotary Club and to the Junior Red Cross Society.

Public Health Subcommittee.

This committee met on four occasions. The question whether puerperal pyrexia, as desired by the Public Health Department, should be compulsorily notifiable was under consideration. The Council, after consultation with the Subdivisions, decided that it was not in favour of this notification.

It was resolved that no objection should be offered to an honorary medical officer, deputed by the central organization, visiting the baby health centres, provided that such visiting was restricted to the supervision of nurses and the working of the centre; that such officer should not come into personal contact with the parents or infants. The Council expressed itself as being opposed to the principle of the medical officer giving honorary service, but that it was willing to waive such opposition during the present time of financial stringency.

Births Notification Act.—This Act came into force on April 1 last. The Council requested that the notification leading to undesirable publicity in the case of illegitimate births should go only to the municipal clerk of the municipality in which the baby was born, but the Council was informed that this would require an amendment of the Act.

The Federal Public Health Department was informed that it did not seem desirable at present that cancer should be made a notifiable disease.

Public Questions Subcommittee.

This committee met on three occasions. It was decided that the cooperation of the daily Press be sought whereby authoritative articles on various matters concerning health and disease might be published, such articles to be supplied gratuitously and to bear the endorsement of the British Medical Association.

It was also resolved that the Association should take a more active and prominent part in the instruction of the public during Health Week. Dr. J. R. Bell was appointed by the Council to organize the lectures for Health Week.

At its invitation, 33 members of the Association delivered lectures, 17 provided articles for the Press, and 18 provided broadcast talks. The Council sent a letter of thanks to each of these.

By their cooperation, Health Week was the best that had been held for many years.

The problem of restricting the activities of unqualified persons and the abolition of quackery was considered, but no effective measures appear to be practicable at present.

The Council also by resolution expressed its thanks to Dr. J. R. Bell and its appreciation of the work done by him in bringing Health Week to a successful conclusion.

Library, Finance and House Subcommittee.

This committee met on eleven occasions. During the year we have to record a still further increase on previous years in the use members have made of the library.

Since the last report one thousand and thirty-four volumes have been borrowed by members for home study, and there have been many members who have availed themselves of the usefulness of the library without withdrawing books from circulation.

Owing to the rate of exchange, books and periodicals from abroad have become very expensive, but we have added ninety new books to the shelves, and three additional journals are now available—*The Journal of Allergy*, *Nosokomeion* (quarterly hospital review) and the *American Journal of Surgery*.

We have to acknowledge with great pleasure the grant of £250 from the British Medical Insurance Company, which is being expended on additional literature and on improved library equipments.

We wish to express our thanks to the directors of the British Medical Insurance Company for this gift, which will add so much to the usefulness of the library.

We have to thank the following for books and periodicals forwarded during the year: Dr. Kent Hughes, Dr. Harold Moore, Dr. J. Newman Morris, Dr. W. L. Potter, Dr. J. T. Tait, and Mrs. C. R. Player.

We desire to express our thanks also for publications received from the Library of the Surgeon-General of the United States of America, from the Association of American Physicians, Philadelphia, from the Henry Phipps Institute of Pennsylvania, from the Philadelphia College of Physicians, from the Philadelphia General Hospital, from Dalgety and Company, Melbourne, and from the Editor of THE MEDICAL JOURNAL OF AUSTRALIA.

The Council was pleased to learn that the Australasian Medical Publishing Company has now turned the corner and had made a profit during the past year. Interest was paid to the debenture holders.

The Australasian Medical Publishing Company adopted the policy of ceasing to forward journals to those members whose subscriptions had not been paid on December 31.

Municipal Franchise.—For a large number of years the Medical Society of Victoria has been paying rates to the City of Melbourne, but it has had no representation on the electoral roll. It was pointed out that the land on which

the hall was built was Crown land vested in trustees who were appointed by the Government; that the hall was used for scientific purposes only and that it should be exempt from taxation. This contention was overruled, but the franchise was granted to three nominees of the Council.

The collection of outstanding subscriptions was entrusted to an accountant with satisfactory results.

The balance sheets will be presented to the meeting of the Branch on February 3 next.

A framed photograph of those receiving the honorary degree of LL.D. at the University of Manitoba, 1930, in connexion with the annual meeting of the British Medical Association held at Winnipeg, was presented by Sir James Barrett. Dr. S. G. Catchlove was thanked for a group photograph of members of the last British Medical Association Congress held in New South Wales.

Dr. Allen Robertson presented a framed photograph of the first meeting of the Representative Body held in the new Hall of the British Medical Association in London, during the annual meeting, 1930.

Science Subcommittee.

The Science Subcommittee arranged the Branch and clinical meetings throughout the year. Ten monthly meetings, three Branch country meetings, one special meeting, seven clinical meetings and ten post-graduate lectures were held. The following papers were read:

February.—Dr. John O'Sullivan: "Some Recent Developments in the Radiological Examination of the Gastro-Intestinal Tract."

March.—Dr. Guy Springthorpe: "Chronic Respiratory Infections of Childhood."

April.—Dr. J. F. Mackeddie: "Lipiodol in Neurological and Pulmonary Diagnosis."

May.—Dr. R. A. Noble: "Importance of Psychiatry in Training and Practice of General Medicine."

June.—Dr. J. R. Bell: "Ulcerative Colitis."

July.—The following papers were read on "Puerperal Sepsis": (i) "Bacteriology," Dr. Lucy Bryce; (ii) "Prophylaxis," Dr. Arthur M. Wilson; (iii) "Diagnosis and Treatment," Dr. Edward White.

August.—Dr. F. V. G. Scholes: "An Address on Scarlatina."

September.—Professor Lambie, Sydney University: "Sleep and Its Disorders."

October.—The following papers were read on "Toxic Goitre": (i) "Pathological Aspect," Dr. R. J. Wright-Smith; (ii) "Surgical Aspect," Dr. Julian Smith, Senior; (iii) "Medical Aspect," Dr. S. V. Sewell.

November.—Dr. Thos. Cherry: "Experimental Tumours and Ulcers of the Intestinal Tract."

In addition, a visit was paid in November to the Anatomy Department of the Melbourne University, when a number of demonstrations were given.

Branch Meetings in the Country.

May.—Meeting at Wangaratta: Dr. H. N. Mortensen, "Modern Methods in Diagnosis and Treatment of Genito-Urinary Conditions"; Dr. Jean Macnamara, "Poliomyelitis, with Special Reference to the Problem of Early Diagnosis" (with cinema films); Dr. V. Davies, "Results of Treatment of Scarlet Fever with Antitoxin"; Dr. E. Kirsner, "Acidosis."

July.—Meeting at Warragul: Dr. G. A. Hagenauer, "Surgical Reminiscences"; Dr. J. M. Andrew, "Achlorhydric Dyspepsia."

October.—Meeting at Camperdown: Dr. G. E. Cole, "The Public Health Responsibilities of the General Practitioner"; Dr. H. I. Holmes, "Some Abdominal Problems, based on Clinical Experience."

The following clinical meetings were held:

April, Austin Hospital; May, Melbourne Hospital; June, Saint Vincent's Hospital; July, Women's Hospital; August, Alfred Hospital; October, Eye and Ear Hospital; November, Childrens' Hospital.

Post-Graduate Lectures.

A series of lectures and demonstrations on common conditions were arranged by the Council for the benefit of members. Ten lectures were delivered at 4.30 p.m. during the winter months and were well attended. The following was the syllabus:

May 19: "Functional Dyspepsias," Dr. J. R. Bell.
May 26: "Antenatal Treatment," Dr. A. M. Wilson.
June 2: "Acute Joints in Childhood," Dr. Douglas Stephens.
June 9: "Treatment of Injuries Round the Ankle Joint," Dr. C. W. B. Littlejohn.
June 16: "Treatment of Diabetes," Dr. J. F. Williams.
June 23: "Treatment of Infantile Diarrhœa," Dr. Stewart Ferguson.
June 30: "Treatment of Fractures Round the Wrist Joint," Dr. H. Trumble.
July 7: "Modern Treatment of Epilepsy," Dr. R. P. McMeekin.
July 14: "Treatment of the 'Red Eye'," Dr. J. O'Brien.
July 21: "Empyema in Childhood," Dr. Rupert Downes.

Special Meetings.

Two special meetings of the Branch were held, one to consider scale of fees for radio-diagnosis, and the other, the adoption of the insurance scheme submitted by the Council.

Standing Insurance Committee.

From the Council's appeal to members £1,442 was received, apart from definite and indefinite promises. Mr. Edgar Ward was appointed Secretary, and room was provided for him in the Medical Society Hall. The subcommittee drew up a scheme of voluntary insurance. This was amended by the Council and submitted to a meeting of delegates, and was afterwards approved by a special meeting of the Branch. At this meeting the Branch placed on record its appreciation of the splendid work of Dr. Embelton in developing the contributory insurance scheme for medical and hospital services. It is proposed to start the scheme in selected districts, after consultation with the local practitioners, and from the experience obtained to consider the advisability of extending its operations throughout the State.

Federal Committee.

The Federal Committee met once during the year. For a report of its proceedings see THE MEDICAL JOURNAL OF AUSTRALIA, April 18, page 486.

It was learnt that influential suggestions were being made that the Commonwealth Government should nationalize the medical profession in Federal Territory. At the request of the Council the Federal Committee asked that representatives of the medical profession in the Commonwealth be consulted before decisive steps were taken.

Lectures by Professors Wright and Buckmaster.

On the occasion of the visit of Professors Wright and Buckmaster to Australia to examine Australasian candidates for the primary examination for the Fellowship of the Royal College of Surgeons, an invitation was extended by the Royal Australasian College of Surgeons to all members of the Association to attend lectures which the visitors kindly consented to give. The lectures were greatly appreciated by a very large audience.

Syme Memorial Lecture.

On the retirement of the late Sir George Syme from practice in 1924, a triennial lectureship was established in his name. The first lecture was delivered by the late Mr. Fred. Bird in 1928, in the presence of Sir George. Owing to the death of Sir George Syme, in 1929, the second triennial lecture became a memorial lecture and was delivered by Dr. A. L. Kenny on November 26. The lecture was entitled: "George Adlington Syme: The Man and the Surgeon."

Social.

Members of the Federal Committee were entertained at the Hotel Windsor on Thursday, March 26.

Thirty-nine graduates were entertained at afternoon tea at the Hotel Windsor on the afternoon of their registration with the Medical Board of Victoria. The President welcomed them into the profession, and they were addressed by Dr. J. F. Wilkinson.

Congratulations were sent to Dr. W. N. Robertson, of Queensland, on his receiving the distinction of C.M.G. from His Majesty the King.

Congratulations were given to Sir James Barrett upon his having the honorary degree of LL.D. conferred upon him by the University of Manitoba on the occasion of the annual meeting of the British Medical Association at Winnipeg in 1930, when representatives from all parts of the Empire were present.

A letter of greeting was sent to Sir Charles Martin on his taking up the appointment, in the Adelaide University, of Director of the Division of Animal Nutrition under the Commonwealth Council of Scientific and Industrial Research.

The Council congratulated Dr. E. R. G. Shiel, who won the British Medical Association prize of £25 for competition amongst final year students. The President presented the prize to him at a meeting of the Branch in May. At the same meeting congratulations were extended to Dr. E. S. J. King on his winning the Jacksonian Prize for 1930.

Retirement of Dr. A. V. M. Anderson.

The Council expressed regret that Dr. Anderson, acting on medical advice, had been obliged to resign his position as a member of the Council, which he had held since 1910. He was President in 1918 and Convener of the Ethics Committee from 1918 until two years ago. He was also one of the representatives of the Council on the Permanent Post-Graduate Committee, of which body he acted as chairman since its inception. At its meeting, held on October 28, the Council placed on record its appreciation of his valuable services in the above capacities.

General.

Practitioners acting as *locum tenentes* were informed that, before taking an appointment in the Federal Capital Territory, they must personally attend before the Registrar, submit diplomas and a signed photograph, make a statutory declaration, and pay £1 1s. registration fee. This regulation does not apply to a practitioner who is summoned in an emergency to perform a medical or surgical service.

Medical officers of health were advised that, if they were approached by their municipal councils, they should not accept a reduction in salary unless such reduction was uniform with that made in the salaries of the other municipal officers, and that the reduction should be temporary only during the time of the present financial stringency. The Health Commission also informed the municipal councils that it did not approve of a higher rate of reduction in salaries than that applicable to other officers of the municipal council.

In reply to a request for an interpretation, it was resolved that "the usual fee for after-treatment" should be the practitioner's usual fee for professional attendance on the patient. The amount must depend on the nature of the services rendered, and might be in accordance with the scale of fees approved by the Branch, or for a smaller sum agreed upon by the practitioner and his patient.

Also "the usual fee for the assistant at operations" should be either not more than £5 5s. or not more than one-eighth of the surgeon's operation fee. If the assistant assesses his services at a higher rate than is thus provided for, he should render his own account.

An informative circular was issued to members, dealing with medical witnesses' fees. Since its issue the fee for mileage for *post mortem* examinations has been reduced from 1s. 6d. to 1s. per mile.

At the request of the Australian Nursing Federation, members were asked to engage trained nurses instead of untrained nurses so far as possible.

The Melbourne Permanent Post-Graduate Committee.

During 1931 the Committee continued its work along the same general lines as in previous years.

In August the annual refresher course was held; in view of the existing economic depression, an entry of thirty-one was considered highly satisfactory. The members were drawn from the majority of the other States and from New Zealand; all expressed themselves as highly satisfied with work provided.

The special course of lectures, arranged concurrently with the refresher course, was this year given by Dr. F. M. Burnet, Assistant Director, Walter and Eliza Hall Institute of Research, Melbourne, on certain aspects of bacteriology and immunology. These lectures were largely attended; they created an interest which was sustained throughout the course and represented a high level of scientific thought and expression.

Earlier in the year a special course of instruction for the primary fellowship examination of the Royal College of Surgeons of England was arranged by the Committee, the lecturers being Professor F. Wood Jones in anatomy and Dr. C. H. Kellaway in physiology. Twenty-two took advantage, completely or in part, of this course. Of these, thirteen sat for the examination, of whom seven passed.

During the year arrangements were made, through the Committee, by several Subdivisions of the Branch for lecturers to visit country centres.

Arrangements have been made for a series of three post-graduate lectures to be delivered in Melbourne in February, 1932, by Mr. C. H. Fagge, Vice-President of the Royal College of Surgeons of England, who is coming to Australasia in connexion with the Royal Australasian College of Surgeons.

Discussions have taken place with the post-graduate committees of other States whereby it is hoped that in future years reciprocity will be attained in regard to overseas lecturers.

At the end of last year Dr. Dunbar Hooper, who had represented the Council of the Branch on the Committee since its inception in 1920, retired from the Council and consequently ceased to represent the Council on the Committee. On account of the value of his services to the Committee and his special knowledge of its work, he was subsequently coopted to the Committee.

During the year Professor W. A. Osborne was appointed as Representative of the Faculty of Medicine on the Committee in place of Mr. Harold Dew, who had been appointed Bosch Professor of Surgery at the University of Sydney.

W. W. S. JOHNSTON,
Honorary Secretary.

The British Medical Agency Pty., Ltd.

The Directors desire to report a fairly successful financial year. Owing to the depression, the turnover was not as much as they could have wished, although the results were satisfactory.

There is still a great need of cooperation between the members of the Branch and the agency. The Directors feel that the members do not realize that it is to their interest to support their agency, and desire all members to give the agency their sole support. In many cases this has not been done.

During this year the agency was able to grant £400 to the Medical Society of Victoria for payment of the interest on debentures.

C. H. MOLLISON,
Chairman of Directors.

British Medical Insurance Company of Victoria.

This company, which is owned by members of the Branch, has continued to make satisfactory progress. It has now been established for five years, and each year has seen an increase in premium income.

The Directors, in addition to giving favourable terms of insurance, have been able to establish a reserve fund, which is now far in excess of the amount usually considered sufficient in insurance business.

The Directors also made a beginning by inaugurating one of the objectives of those who urged the formation of the Society, namely, to assist financially by contributing to the funds of the Branch. This year the sum of £250 has been placed at the disposal of the Honorary Librarian

for the purposes of the library. It is hoped that this sum will be continued in the future and that further sums may be made available for the benefit of members of the Association.

C. H. MOLLISON,
Chairman of Directors.

Sections.

Radiological.—During the year ten meetings have been held. In August the Section invited Dr. H. R. Sear, of Sydney, to deliver two post-graduate lectures on "The X Ray Aspects of Certain Forms of Bone Pathology." These lectures, to which orthopædists and surgeons were also invited, proved highly successful.

A detailed scale of radiological fees was drawn up and adopted by the Branch; an essential aspect of this scale is the provision that these fees may be reduced on the recommendation of the medical advisers.

The number of financial members is 17.

COLIN MACDONALD,
Honorary Secretary.

Ophthalmological.—Five meetings were held during the year. At each meeting cases of clinical interest were shown. Papers and addresses were given by:

Sir James Barrett: "Trachoma and Ophthalmia in Egypt, 1915-1918."
Professor W. A. Osborne: "Some Problems of Corneal Permeability."
Dr. C. E. Brodie: "Radiotherapeutics of Ocular and Peri-Ocular Lesions."
Dr. J. R. Anderson and Dr. T. a'B. Travers: "Fusion Training and Retinal Detachments."

The average attendance of members at meetings was 21.

W. J. L. DUNCAN,
Honorary Secretary.

Ear, Nose and Throat.—Five meetings were held during the year. The membership consists of 36.

ERIC GUTTERIDGE,
Honorary Secretary.

Anæsthesia.—Quarterly meetings were held and the October meeting was open to all members of the British Medical Association. There are 20 financial members.

ERIC GANDEVIA,
Honorary Secretary.

Subdivisions.

Metropolitan.

Melbourne Central.—Dr. J. F. Wilkinson was elected Chairman and Secretary of the Subdivision. A meeting approved generally of the insurance plan as submitted, except that it recommended a capitation fee in place of capitation fee *plus* attendance fee. It disapproved of the compulsory notification of puerperal pyrexia in the scheme submitted.

The Subdivision made a good contribution towards the insurance fund.

JOHN F. WILKINSON,
Honorary Secretary.

Western.—Two meetings were held, at which a fair number was present. The members expressed themselves strongly against notification of puerperal pyrexia.

W. J. COSTELLOE,
Honorary Secretary.

South Central.—A meeting was held on March 16, when approval was expressed of the appointment of a paid secretary to the Standing Insurance Committee. A further meeting was held on September 4, when office-bearers were appointed.

In answer to a request from a local lodge for a reduction of the medical officer's salary, it was resolved that the friendly societies should first bring pressure to bear on the Government Statist to allow the societies to handle their huge accumulated funds.

A meeting was held on September 11, when approval was given to the insurance policy of the Council.

A further meeting was held on September 14, when the recommendations with regard to puerperal pyrexia were disapproved.

FRANCIS E. MCAREE,
Honorary Secretary.

Eastern.—The activities of the Subdivision were directed entirely towards matters of medical policy. At a series of meetings the average attendance was about 30, and lengthy discussions took place with regard to the Standing Insurance Committee, the proposed new lodge agreement, puerperal pyrexia and the proposed hospital policy.

In the ensuing year a greater opportunity will be given to the discussion of purely scientific problems.

NEWPORT WHITE,
Honorary Secretary.

Country.

Geelong.—A number of clinical and business evenings have been held. Lectures have been given by:

Dr. Allen Robertson: "Recent Advances in Gynæcology."

The lecture was illustrated by Dr. S. Crawcour, who also showed interesting films on radium technique.

Dr. Kingsley Norris: "Difficulties Commonly Met in Treating Children."
Mr. H. Searby: "Recent Advances in Surgery of the Chest."
Dr. Leslie Hurley: "Difficulties Often Encountered by the Physician."
Dr. Bell Ferguson and Dr. C. H. R. James: "Treatment of Tuberculous Patients."
Mr. W. G. D. Upjohn: "Low Backache Pain."

The lectures were well attended by Geelong and Colac members.

On the occasion of one of the lectures the Geelong members entertained their colleagues of Colac and the surrounding districts at dinner.

J. E. PIPER,
Honorary Secretary.

South-Western.—Four meetings were held: two at Camperdown, one at Warrnambool and one at Hamilton.

Lectures were delivered by:

Dr. C. Scantlebury: "Nasal Sinusitis."
Mr. C. Littlejohn: "Traumatic Arthritis."
Mr. Rupert Downes: "Orthopædics."

The last two papers were delivered under the auspices of the Permanent Post-Graduate Committee.

At two of the meetings interesting clinical material was shown.

In October a Branch meeting was held at Camperdown and was attended by 46 members. Eleven cases were shown, two papers read, and a medical moving picture exhibited. The majority of the visitors came from the metropolitan area.

On the Sunday several parties went to Port Campbell, while a party of about 20 visited Meningoort Station and were entertained by Dr. Norman McArthur and his sister.

The Subdivision has now completed ten years of existence. Thirty-eight meetings have been held, of which three have been Branch meetings. The average attendance of the 35 subdivisional meetings was 12 out of a possible 22 residing within a radius of sixty miles of the places of meeting. Fifteen of the lectures have been delivered under the auspices of the Permanent Post-Graduate Committee. The Division expressed indebtedness to those office-bearers of the Branch Council who have from time to time visited the Subdivision and spoken on medico-political topics.

GEO. COLE,
Honorary Secretary.

Gippsland.—Three meetings have been held—at Yallourn, Sale and Warragul. At Yallourn 12 members attended, and clinical cases were shown by the hospital staff and a paper was read by Dr. J. W. Grieve: "Infant Welfare." At

Sale 19 members attended. Clinical cases were presented and a paper read by Dr. Stuart Cowen: "Cardiac Failure."

On July 18, at the Warragul meeting, 50 members attended, including the President, members of the Council, and others from the metropolitan area. Clinical cases were shown by the hospital staff and papers read by Dr. J. M. Andrew, of Yallourn, and Dr. G. A. Hagenauer, Sale. Interesting technical films were shown by the courtesy of Kodak Proprietary, Limited.

In answer to an appeal by the President of the Subdivision, 21 members sent contributions towards the insurance fund.

CONRAD M. LEY,
Honorary Secretary.

Goulburn Valley.—Four meetings were held at Mooroopna during the year. At the clinical meeting cases were shown by the members of the honorary medical staff of the local hospital.

At two meetings medico-political subjects were discussed, including the proposed new lodge agreement and the voluntary medical insurance scheme.

At the annual meeting the office-bearers were elected.

ANNIE L. BENNETT,
Honorary Secretary.

In conclusion, the Council desires to express its appreciation of the work done during the past year by the Subdivisions and Sections of the Branch.

It also expresses its appreciation of the loyal and efficient services of the staff throughout a very busy year.

On behalf of the Council,
VICTOR HURLEY, President.
J. P. MAJOR, Honorary Secretary.

INDUCTION OF PRESIDENT.

DR. VICTOR HURLEY then introduced DR. B. M. SUTHERLAND as the President of the Branch for 1932, and wished him a successful term of office. Dr. Sutherland was supported by the two Vice-Presidents, Dr. D. G. Upjohn and Dr. Gerald Weigall.

Dr. Sutherland returned thanks for his election to the office of President.

PRESIDENT'S ADDRESS.

DR. VICTOR HURLEY then delivered his address (see page 1).

VOTES OF THANKS.

A vote of thanks to Dr. Victor Hurley for the services that he had rendered to the Branch during his year of office was moved by Dr. A. L. Kenny, seconded by Dr. Constance Ellis, and carried by acclamation.

SIR RICHARD STAWELL moved a vote of thanks to the retiring members of the Council, Dr. A. V. M. Anderson and Dr. W. W. S. Johnston, who were retiring for health reasons, and to Dr. G. J. Ley, of Warragul. The motion was seconded by Dr. Murray Morton and carried by acclamation.

Proceedings of the Australian Medical Boards.

QUEENSLAND.

THE undermentioned have been registered pursuant to the provisions of *The Medical Act of* 1925, of Queensland, as duly qualified medical practitioners:

Cotter, Timothy John, M.B., B.S., 1924 (Univ. Melbourne), Commonwealth Health Laboratory, Toowoomba.

Dinwoodie, Coiler, M.B., B.S., 1917 (Univ. Melbourne), Beaudesert.

Dungan, Rae William, M.B., B.S., 1930 (Univ. Melbourne), Townsville.

Restoration to the Register:

Chapman, William James, M.B., Ch.M., 1921 (Univ. Sydney), Townsville.

Additional diplomas:

Drew, John Grahame, D.T.M., 1930, D.T.H., 1931 (Univ. Sydney), Brisbane.

Correspondence.

TRAUMA AND ORGANIC VISCERAL DISEASE.

SIR: I have to thank Dr. H. L. Fry for his contribution to the discussion on the relation between muscular effort and visceral trauma. I did not find it easy everywhere to follow his reasoning, but some of it I think I can confidently disagree with, at least for the present, for in these questions the truth is all that matters, and I hope I have, as I try to have, a continuously open mind. As far as I can grasp the argument, I have seen nothing to shake the constructive reasoning set up in my papers. But I wish Dr. Fry would do two things. The first is to present a constructive theory that does not possess the objections that he sees in mine. The second is to expand his argument so that it becomes easier to follow. I am often reproached for delivering myself at too great length, but I would much prefer Dr. Fry to commit the same offence, if it is an offence.

Let us take Dr. Fry's second paragraph, in which he describes hydrostatic conditions as being limited in the abdomen by discontinuities and restrictions to free movements. Surely this was covered by the matter in my second paper, especially in the paragraph headed "Muscular Contraction" and in the reasoning on the conditions typified by Diagram II. He says then that "Boyle's law, which relates to gaseous states, cannot have any general application to intraabdominal conditions." That is to say, if I understand him correctly, he denies the validity of the whole of my second paper. Valid or invalid, that paper was built up only after a long and careful analysis of the conditions, and I can only say now that I do not accept his opinion. Boyle's law does and must have a general application to intraabdominal conditions. It is inescapable. The onus of disproof is not on me; it is on Dr. Fry. I believe, however, that Dr. Fry will change his opinion when he goes right down to fundamental physics and builds up the theory that he is going to give us.

I come now to his next paragraph. I think he has mixed his concepts and got a wrong mental picture. There are two kinds of intragastric pressure induced by filling the stomach with fluid. One is that caused by gravity, and depends on the weight of the column of fluid. It causes a hydrostatic pressure which is equal at all points at the same depth, but increases with the depth. It is greatest at the bottom of the column. It is non-existent in the part of the stomach above the surface of the fluid. The other kind of intragastric pressure is that due to the peristaltic contractions excited by the presence of the fluid. This is a hydrostatic pressure which is measured by the gas pressure above the surface of the fluid. If the peristaltic muscular movements are such that they cause a diminution in the volume of the organ, then a corresponding increase in volume of the rest of the hollow gas-filled viscera is permitted, and, according to Boyle's law, there is a proportionate diminution in the pressure in them. The gravity pressure of fluid is different. I took care to point this out, and I discussed the effect. In the supine position the weight will be taken by the retroperitoneal structures. In the erect position, if the fluid is too heavy and the gastric muscle too weak, the stomach might sag to the pelvis and rest there. But ordinarily it will ride on the coils of intestine, and in that case the gravity pressure will be taken up and distributed throughout the general abdominal cavity, both above and below, once more according to Boyle's law. The sag of an overweighted stomach is not caused by muscular contraction, but by relaxation. It has nothing to do with the general intraabdominal hydrostatic pressure. In any case, the part of the stomach that

sags is never normally in close relation to the liver. In the food-containing stomach there is gas above the level of the fluid, and this gas is under a pressure that is exerted in all directions, upwards just as much as downwards, and this pressure is not less than that of the general abdominal cavity. It may be more.

The next paragraph, I think, can be shortened by using a paraphrase, without altering Dr. Fry's meaning. I take him to mean, in short, that in the response to movement by which pressure is readjusted there is a time-lag in which shearing stresses or uneven pressures may develop. If that is his meaning, he has put his finger on the one critical spot where I saw a chance of fallacy myself. It seemed to me that there must be a time-lag, and of course there is, as Dr. Fry has seen. But is the time-lag something which we have to regard as a practical consideration, or is it so insignificant as to be negligible? I put this to one of our teachers in the Engineering School who had read my papers, and his answer was that as far as engineering problems were concerned, time-lag of this kind was neglected, though, in theory, time-lag must be admitted to exist. So I thought I could safely let it go at that, and presented my paper without embodying a discussion of time-lag. I can add that I was warned by another engineer that time-lag was a subject only to be dealt with by great mathematical physicists.

Yours, etc.,

C. E. CORLETTE.

Sydney,
December 12, 1931.

Diary for the Month.

JAN. 4.—New South Wales Branch, B.M.A.: Organization and Science Committee.
JAN. 5.—New South Wales Branch, B.M.A.: Council (quarterly).
JAN. 8.—Queensland Branch, B.M.A.: Council.
JAN. 12.—New South Wales Branch, B.M.A.: Ethics Committee.
JAN. 19.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
JAN. 27.—Victorian Branch, B.M.A.: Council.

Medical Appointments.

Dr. A. L. Caselberg (B.M.A.) has been appointed Government Medical Officer at Kingaroy, Queensland.

* * *

Dr. W. A. Brady (B.M.A.) has been appointed Acting Medical Superintendent of the Hospital for the Insane, Ararat, Victoria, pursuant to the provisions of the *Lunacy Act*, 1928.

* * *

Dr. H. T. Bourne (B.M.A.) has been appointed Acting Medical Superintendent of the Hospital for the Insane and Receiving House, Royal Park, Victoria, pursuant to the provisions of the *Lunacy Act*, 1928.

* * *

Dr. T. G. C. Retallick (B.M.A.) has been appointed Acting Medical Superintendent of the Hospital for the Insane, Beechworth, Victoria, pursuant to the provisions of the *Lunacy Act*, 1928.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes*, sought, etc., see "Advertiser," page xiv.

HOMŒOPATHIC HOSPITAL, MELBOURNE, VICTORIA: Resident Medical Officer.

INSPECTOR-GENERAL OF HOSPITALS DEPARTMENT, ADELAIDE, SOUTH AUSTRALIA: Honorary Clinical Assistant.

LAUNCESTON PUBLIC HOSPITAL, TASMANIA: Resident Medical Officer (Male).

MARRICKVILLE DISTRICT HOSPITAL, SYDNEY, NEW SOUTH WALES: Senior Resident Medical Officer.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company Limited. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association, Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Members desiring to accept appointment in ANY COUNTRY HOSPITAL, are advised to submit a copy of their agreement to the Council before signing, in their own interests. Brisbane Associated Friendly Societies' Medical Institute. Mount Isa Mines. Toowoomba Associated Friendly Societies' Medical Institute.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Lodge Appointments in South Australia. All Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (Wellington Division): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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